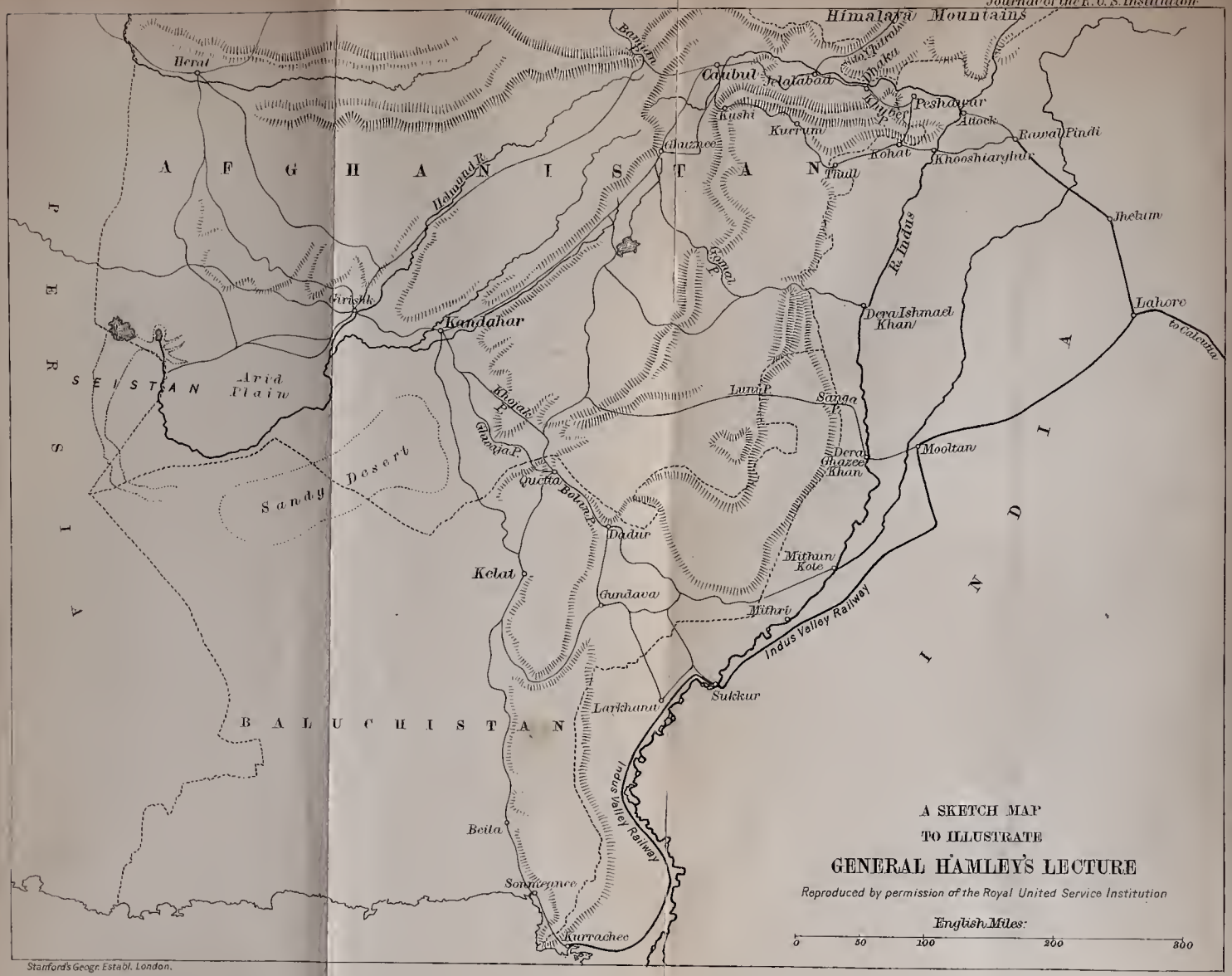

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A SKETCH MAP
TO ILLUSTRATE
GENERAL HAMLEY'S LECTURE

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OUR

SCIENTIFIC

FRONTIER.

BY

W. P. ANDREW,

AUTHOR OF "INDIA AND HER NEIGHBOURS," "THE INDUS AND ITS PROVINCES," "MEMOIR ON THE EUPHRATES ROUTE," ETC., ETC., ETC.

WITH SKETCH-MAP AND APPENDIX.

"In these border lands to have a rival in prestige and power would be dangerous; to have a superior would be impossible."—*India and Her Neighbours.*

"It is a solecism of power to think to command the end, and yet not to endure the means."—*Bacon's Essays of Empire.*

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PREFACE.

HAVING given much attention for many years to developing the resources of Scinde and the Punjaub, by railways and other means of improved communication, I have of necessity had my attention called to the border lands which girdle our north-west frontier, their people, their resources, their modes of government, and their political leanings, affecting as they do the fortunes of our Indian Empire.

Our relations with Russia, as we have lately seen, have been greatly influenced by the proceedings of that Power at Cabul, and our relations with Cabul have changed, and must ever modify our treatment of the intervening hill tribes; so that political or warlike movements in Afghanistan or Central Asia affect, more or less immediately, European politics.

Besides having, from circumstances, taken an interest in the political questions stirring the nations of Central Asia, I have for a long period been honoured with the friendship of many distinguished Officers and Civilians who have spent a great portion of their lives in the frontier lands of India, and it is chiefly on their friendly suggestion and approval that I am emboldened to give my views on so grave and intricate a question as the settlement of the frontier on our north-west border.

Attention in this little work has been almost exclusively given to such measures as would save India from the recurrence of needless alarms of invasion, and I have said nothing as to the future fate of Afghanistan—that is a matter of high policy to be determined by events still in the future; but we cannot leave the country until we have put down armed resistance at Ghuzni and elsewhere. And when this is done, we cannot retire and leave nothing but anarchy behind us; we cannot consent to give Herat to Persia, *i.e.* to Russia; to take it ourselves would be a certain embarrassment in Asia, and might complicate matters in Europe.

Let the Afghan princes and sirdars be allowed freely to choose the man they would have to rule over

them, and let us then retire, having vindicated our supremacy and done our best to form a stable and friendly government, retaining permanently only Candahar and such portion of the country as might be considered essentially necessary for defensive purposes, evacuating Cabul, Jellalabad, and all other territory, with the Khyber, the portals of which should be hermetically sealed by the requisite fortifications. Then we might say, in the words of the Premier, "*the gates of India are now in our hands.*"

I have to express my acknowledgments to the Council of the Royal United Service Institution for their courteous permission to reproduce the Sketch-Map which accompanied General Hamley's lecture, published in their journal. I have also to thank the Royal Geographical Society for the ready access afforded me to recent information regarding Afghanistan.

THE AUTHOR.

29, Bryanston Square,
March, 1880.



CONTENTS.

CHAPTER I.

Our North-western Frontier 1

CHAPTER II.

Summary of History of Afghanistan and of our Relations with that Country 14

CHAPTER III.

Afghanistan.—Geographical Description.—General aspect.—Mountains and Rivers.—Climate.—Mineral Wealth.—Animal Produce.—Vegetable Produce.—Fruits.—Flora.—Cultivation.—Harvests 28

CHAPTER IV.

Afghanistan.—Manufactures, Silk, Posteens, Chogas, Felts, Rosaries, Wine.—Trade, Want of Roads, Tolls, Amount of Trade, Competition with Russia, Necessity for counteraction 38

CHAPTER V.

The Independent Border Tribes.—Their Character.—Sir R. Temple's Opinion.—Conduct towards the British.—Our Treatment of them.—Frontier Expeditions.—Frontier Civilians and Soldiers.—Eventual absorption of Border Lands into British Territory 46

CHAPTER VI.

The Passes.—Means of Communication.—Lord Napier of Magdala.—Sir Herbert Edwardes, Lord Sandhurst, Lord Lawrence, Sir Bartle Frere, Sir R. Montgomery, Sir Donald McLeod, Sir H. Durand, Sir R. Temple, &c.—Forts.—Bridge at Attock 55

CHAPTER VII.

The probable Route of the Invader, and how to meet him.—General Abramoff.—Sir Henry Green.—Sir William Merewether.—General Hamley 67

CHAPTER VIII.

The Powindahs, or Soldier-Merchants of Afghanistan . . 77

CHAPTER IX.

Beloochistan.—Persia.—Turkestan.—Russia, how to check her Advance.—Opinion of Field-Marshal-Lieutenant von Kuhnenfeld 87

APPENDIX I.

The Sherpur Cantonment.

APPENDIX II.

The Bolan and Khyber Railways.

APPENDIX III.

Transport by Rail of Troops, Horses, Guns, and War Material in India.

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OUR SCIENTIFIC FRONTIER.

CHAPTER I.

OUR NORTH-WESTERN FRONTIER.

The question of a scientific, or rather of a strategic, frontier is one that has been much discussed, but on which no very definite opinion has yet been given. There are few who look upon the old line as perfect, and the number who approve of the line being drawn so as to include Cabul, Ghuzni, and Candahar is equally limited. It is true that many elements come up for consideration before defining a hard and fast boundary line: the political cannot be separated from the military, and yet to subordinate the latter to the former would be in the highest degree injudicious.

Wherever our frontier line may eventually be drawn, it must fulfil certain requirements, and the chief point to be remembered is that the best line of defence is one which admits of a bold offensive stroke being undertaken

as opportunity offers. A commander may await attack within his entrenchments ; but he who has not secured a flanking fire down his front, and has not provided for an effective counter stroke when his assailants have been thrown into disorder, is unworthy the name of a soldier. A frontier, too, should be easy of access at all points, and all inlets should be so covered as to render their passage by an enemy from the outside virtually impracticable. The outworks to be held should be commensurate with the strength of the garrison, and troops should not be frittered away in holding detached posts, of no value in themselves, and where they may be starved out and compelled to surrender.

But before venturing to give my views on this most important matter, so intimately affecting the peace and well-being of India, and so closely as it is mixed up with political movements in Europe, it appears necessary to give an outline of the bolder features of the border-lands lying between the British possessions and those under the domination of Russia, with some account of the people and their resources.

Englishmen, proud in the security of their sea-girt isle, are apt to look with distrust on any frontier line save one formed by the ocean, one which can be, so to speak, patrolled by the fleet we rightly deem our first line of defence. Without exactly fulfilling these conditions, India may be likened to an island which has but one practicable landing-place. The north-west frontier is her one vulnerable spot. From the earliest ages, successive invasions have rolled down into Hindostan through the rugged passes which pierce the Suliman

mountains, whilst few launched from other quarters have reached her fertile plains. Prior to our rule, the state of the country, split up as it was into numerous kingdoms, with divers creeds and divers tongues, made the task of conquest light. Even in our own days, when a consolidated empire has taken the place of emasculated states, alarms of invasion have not been infrequent. Consequently the necessity of obtaining a powerful if not impregnable border line in this direction has long been the aim of Anglo-Indian statesmen.

Bounded on the north by a series of rugged ranges containing the loftiest mountains in the world, which are traversed only by a few difficult inhospitable passes ; on the east and west by a sea-board upwards of four thousand miles in length, with but few good accessible harbours, there are probably few countries on the face of the globe possessing greater natural defences than the peninsula of Hindostan. With our superior naval power, and with the peculiar disadvantages the Indian sea-coast presents to an invader, we may consider the empire free from liability to invasion from that side, and need look only to the dangers attendant on irruption through the mountains which sweep round from Burmah to Scinde. Our knowledge of these ranges is slight ; we know that they are for the most part wild and inaccessible, peopled by tribes more or less warlike, with but rude forms of government, jealous of external interference, full of bigoted fanaticism, and whether Moslem or Buddhist, endowed with a violent hatred to all Christians, which impels them to throw every obstacle in the way of travellers. This accounts for the fanciful sketches which

now adorn our study walls under the title of Maps of Central Asia.

An accurate knowledge of the countries on the further side of our frontier line is essentially necessary to the proper working of any thorough scheme for the defence of our Indian Empire, yet few efforts have been made to lift the veil of ignorance which enshrouds these regions. Our knowledge of them is scanty, and is for the most part derived from ancient books, which, though replete with interesting information, contain few accurate geographical data, or else from the reports of Russian explorers, who, with noble persistency, penetrate the innermost recesses of the khanates of Central Asia. It is true that Sir Douglas Forsyth's Mission gave us a reliable account of the road to Yarkand; that Colonel Montgomerie's native surveyors have mapped out useful road surveys through the Himalayas; that Colonel Macgregor, with characteristic intrepidity, has traversed Persia and Afghanistan, adding much to his previous knowledge of those countries. Still it cannot be denied that we are strangely ignorant not only of the ground beyond the ramparts of Hindostan, but the very ramparts themselves are only partially explored. The outworks are in the hands of enemies who deny the garrison the right of entrance, and we fear to insist on a proper plan of our fortress being drawn to scale.

We know that the mountain barrier of India consists of an apparently interminable series of ranges towering one above the other, pierced here and there by a few roads sometimes carried up water-courses and over necks

of land close on twenty thousand feet above sea-level. We know that the climate in these passes varies from the extremes of heat to the extremes of cold; that they vary in scenery from the arid desert or rank vegetation of the tropic to the snow-clad pinnacles and glorious glaciers of the loftiest mountains in the world. We know that in many, food for man and fodder for beast is absolutely unprocurable, and that the want of the common necessaries of life is the cause of the death of hundreds who essay their passage. Of many of the roads and rivers which run through these mountains, of the people who inhabit them, their languages, manners, customs, and their history, we know little or nothing. Even the general run of the mountains themselves is a mere matter of conjecture, and the course of rivers whose names are household words at home is absolutely unknown to geographers. The Government of India has thrown open the door of its house, and has freely allowed whosoever will to enter; merchants from the far north, and their brethren from the west, come unannounced and trade unrestrictedly; but no subject of its own is permitted to pass these portals in order to see what lies beyond.

Far different has been the policy of Russia in this respect. She has long seen the military necessity of accurate surveys of the ground beyond her frontier, and the commercial advisability of entering upon such a task likewise appeared considerable. The foundation of the Russian Imperial Geographical Society in 1845 gave a fresh impetus to Central Asian research; and in order the more fully to investigate countries in close contiguity

with such a colossal empire, it became necessary to establish at the extremities of the kingdom branch societies in direct communication with headquarters, each being entrusted with the exploration of lands in their more immediate circle. In 1850 the Caucasian section of the Russian Imperial Geographical Society was formed at Tiflis. In the following year the Siberian section was instituted at Irkutsk, and in 1867 the Orenburg section. The Russian Geographical Society—unlike our own Royal Geographical Society—limits itself to investigations of those territories under the Russian sceptre, or of those which may hereafter be brought under its sway. Annually it sends forth exploring parties, east and west, north and south; and as it is pecuniarily assisted to a large extent by Government, its researches have been invaluable. A glance at the Russian map of Turkestan published in 1875, and that brought out last year, will show what gigantic steps our neighbours have made in the knowledge of the geography of Central Asia.*

So far as I am aware, explorations beyond our Indian frontier have never received more encouragement from Savile Row than from Downing Street, or from the Government House in Calcutta. The treatment of Captain Butler, of the 9th Foot, last year, and of Colonel Macgregor in 1875, fully shows that Government decline

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* "The 'Militär Wochenblatt,' the chief army journal in Germany, edited by General von Witzleben, is publishing a series of articles on 'The New Afghan Campaign,' which, though hitherto containing little criticism, are distinguished for a fulness and method of detail calculated to show how painstaking must be the statistical labours of those employed in the historical department of the Grand General Staff, even when the subject has but a remote interest for the new empire."—"*Berlin Correspondent*" *of the* "*Times*."

to aid in clearing up the inaccuracies which mar our maps of Central Asia; and the positive prohibition of missionary enterprise beyond our frontier line closes another avenue of knowledge only to be gained by great personal risk to the individual, which might involve the Government in serious political complications. Even of the country lying close within our boundaries, we are strangely ignorant. The ordinary maps of the Trans-Indus provinces teem with inaccuracies, notwithstanding the careful surveys and maps of General H. C. Johnstone, C.B., which have been published by the Government of India.

The whole of Cashmere, including Gilgit, has, I believe, been surveyed under the operations of the Grand Trigonometrical Survey of India.

In 1851–52 Colonel Walker, now Surveyor-General of India, made an accurate military sketch of Kohat and the Khuttuk hills.

We know enough, however, of the northern barrier of India to feel assured that invasion through it is impossible. From Hazara to Burmah the country, I may say, is ice-bound. No modern army accompanied with the implements of war necessary for the subjugation of Hindostan could possibly traverse it. There nature makes us impregnable, even as the absence of ports along our coast line render a sea invasion impossible. We have therefore only to turn to that strip of territory which runs from the famed Khyber Pass to the shores of Beluchistan; and having rendered that a scientific frontier, in the true sense of the word, we can scoff at alarms.

For the last thirty years our frontier has run con-

terminously with that of Afghanistan; and ever since the commencement of this century, when Napoleon conceived the idea of emulating the achievements of Alexander and invading Hindostan, our attention has been directed to the paramount necessity of accurate maps of the "border lands of India." Every Englishman who has taken even the most cursory interest in the history of our Indian Empire, must have felt that the day would surely come when we should be drawn into close connection with the kingdom raised up by Ahmed Shah, yet during the long years which intervened between the first and second Afghan wars how small have been the attempts to add to our knowledge of the country. The Belooch country and the principal passes through it are now well known, more particularly since the force under General Biddulph marched from Pishin eastward to the Punjab, exploring, by means of detachments, the Belooch country south of the line of march, and the Sakhi Surwar and other passes, which, issuing from the Suliman range, enter the Punjaub about the latitude of Deyra Ghasee Khan.* Nevertheless an ac-

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* Extracts from a Paper read Feb. 1880, before the Royal. Geographical Society, on "The Eastern Border of Pishin and the Basin of the Loras, in Afghanistan," by Major-General Sir Michael A. Biddulph, K.C.B., R.A. :—

"Kand Peak, which was fixed by our survey officers to be in lat. 30° 48′, and long. 67° 29′, is now removed from its position on the old maps to a point fifty-five miles further south-west, and the spur of the Sofaid Koh (by whatever name we may eventually call it) now assumes a more westerly direction, and forms the east boundary of Pishin. The Kand Peak we had seen snow-clad, and a commanding point as we marched along the Daman road, as we came from Kandahar, and as we opened the Barshore Valley it came well into view, and asserted itself as one of the chief objects in the ranges which form the boundaries of the Pishin plains.

"The physical character of this pass, its comparatively low elevation, the

curate definition of our north-west frontier is a difficult task; and as there are certain indications that the line

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easy gradients leading to it, and the cultivated, open nature of this habitable plateau, mark it, as it lies between two great systems of populous plains, as a way of communication which must in the future come into use, and we are sure to hear of it again. This exploration defined the extent of the Pishin basin in this direction."

"We have now, in following the Kakur Lora and the Surkhab to their several sources, ascertained and defined the limits of the Lora or Pishin basin on this eastern side of the province, and become acquainted with three passes and roads leading towards India. We have found most prominent as landmarks, and also as grand mountain forms, the Peaks of Kand and Surgwund, and the precipitous ridge of Mazwah, and the isolated promontory of Takatu. Toba Peak and Mount Chappar, prominently given in the old maps, we have not heard of."

"So much has already been written on the subject of the Kojuk and the Khoja Amran generally, that a minute description will not be necessary. We may not, however, leave unnoticed passes which are now easily traversed routes for even wheeled traffic. The Kojuk Nulla is a dry river bed, wide and ascending easily, it offered a track for a road which required no making. At about the ninth mile from Killa Abulla Khan the spurs press on the nulla, and it becomes a defile. The defile at about a mile from the top is still wide enough to afford camping-ground, and there is a good deal of khinjak wood in the valley, and of brushwood on the slopes of the hills. Gradually the nulla is completely compressed between rocky sides, and the gradient increases, and for half a mile from the top it is very steep.

"In three days our troops improved sufficiently for camel and mule traffic, the native tracks, and in one part we brought into use a portion of the road made during the old expeditions. The summit is more or less rounded, and we were enabled to cut out of the hill-side platforms for siding guns and carriages.

"The descent is far more abrupt than the ascent, and at first the passage of laden camels caused these poor creatures much suffering, and the loads were cast, and blocks of the transit took place. In a short space of time it was impossible to make roads with good gradients, so to pass over guns a slide was made, having an average slope of 30°, which led from the top down to the commencement of an easy slope which extended down to Chuman. In a day and a half a whole battery was passed over, and a steady stream of troops, camels, cavalry, guns, onward, and of unladen camels returning, produced a busy scene of traffic from early morning till dark."

"The country to the eastward, in the direction of Quetta, is crossed by a number of ridges, and cannot therefore be compared with the plains of Pishin in regard to the facilities offered for a railway; we are

laid down by the Treaty of Gandamak will shortly be pushed on to the westward, it is an unnecessary one.

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therefore led to the conclusion, that we shall not find any route which affords such facilities as the Ghwaja, where the difficulties, we believe, may be overcome."

"The boundary between Kelát and Afghan territory runs diagonally from a little north of Kujlak, leaving that place in Kelát, and Julobgeer and Mehterzai in Afghan dominion."

"We find three great valleys having their origin in the highlands east of Pishin so disposed as to offer a choice of routes towards the Punjab. We never could have anticipated that this hitherto unexplored country would prove to be laid out so favourably for the routes we were in search of."

"We were first made completely acquainted with the whole arrangement of the internal part of the Pishin basin on gaining the top of the Surai Mugzai Pass, and in making the excursion in the Barshore Valley.

"This great open space is inhabited by a population of Syuds and Turrins, with a fringe of Kakurs and Achukzais. Generally employed in agriculture and engaged in mercantile pursuits, they are decidedly peaceable in their habits, and would gladly be defended from the incursions of their more warlike neighbours who live in the hills which bound the north, east, and west sides of the province.

"Though the aspect of the country is strangely void of clothing, it is abundantly well watered by the numerous streams and karezes which descend from the surrounding mountains. Chains of villages follow the watercourses, and the area of cultivation is even now very considerable. This interesting country requires repose and the fostering care of a strong and good government.

"Considering the miraculous change brought about by the last twenty years of peace and quiet in the Punjab and Sinde, it is possible to realise what will take place here.

"Before the next twenty years will have come to a close, the railway will have passed on towards Persia, through tracts of country over which it is even now possible to drive a phaeton. Roads or railways will have been constructed down the easy and fertile valleys of the Kakur country to India. The area of cultivation will have increased, and groves will have sprung up around the villages and along the watercourses. The people, already traders, will have benefited by the new communications, and in carrying their produce down to India and to the sea, and returning with European goods, they will have learnt by their intercourse the value of commerce and of a peaceable, firm and just rule.

"Such has been the change produced in many other countries, and notably in those mentioned, which have passed under our influence in India, and we may safely draw such a picture of the immediate future of Pishin."

Yet a brief description is advisable; for though the daily papers have manfully played the *rôle* of Professors of Central Asian Geography, for the past twelve months, it is probable that the public have not been apt pupils, and are somewhat hazy as to the exact limits of the Indian Empire.

For all purposes of defence the valley of Cashmere must be considered a portion of our Indian Empire and included in any scheme for its defence.* In describing our north-western frontier, therefore, I will commence with the most northerly portion of the Maharajah of Cashmere's territory at the Gundrab Pass. From this point the border line runs in a south-westerly direction until it reaches the Choojur Pass near Gilgit, thence following the watershed of the main range it bends in to the eastward to the Indus at Boonji. From this point to Torbela the left bank of the river Indus forms the frontier line, and as for a distance of one hundred and twenty-five miles the course of that mighty stream has never been surveyed, our boundary must necessarily be undefined; then sweeping round the Peshawur valley, it includes the Michni and Khyber roads as far as Lundi Kotal, where it once more breaks back to the eastward until it almost reaches the Indus, in order to admit of the jutting projection of Afridi territory. From the Narac peak, the easternmost portion of Afridi territory, the new border line bears away due west, following the

* Major James Abbott, one of the band of brothers who have done so much for our Indian empire, was selected to demarcate the boundary between Hazara and Cashmere. The cantonment of Abbottabad takes its name from him.

foot of the Sufaid Koh range until the Shutargurdun (camel's neck) is reached; it then follows the course of the Kuram river to Bunnoo, whence, following the general run of the Suliman range, it passes about sixteen miles N.W. of the Indus near Kusmore, and nowhere in Scinde approaches that river nearer than fourteen miles. At about thirteen miles distant W. from Kusmore it proceeds first in a west and then in a south-westerly direction for about one hundred and thirty miles over a dead level country until it reaches the mountains forming the eastern boundary of Beloochistan at a point a little south of the 28 N. lat., and reaches the sea at the mouth of the Habb river near Kurrachee.

This frontier consists for the most part of a well-defined mountain range, some of the peaks of which, in the north-west portion, tower to a height of twenty thousand feet above sea-level; and in rear of it, at a distance never exceeding fifty miles, rolls the mighty Indus, navigable from Torbela to the sea by the boats of the country. In the summer months the melting of the winter snows swells the volume of its waters; then the pent-up torrents, warmed into new life by an almost tropical sun, dash down from the everlasting glaciers of the Himalayas, and, mingling with their parent stream, roll in one turbid mass through the narrow gorges of its upper courses. Bursting its bonds at Kalabag the waters spread like a sea over the surrounding country, until at Dera Ismail Khan the eye can with difficulty discern the farther shore. In the winter all this is changed; nowhere does the current exceed two or three miles an hour; while

the breadth, often less than a furlong, permits of pontoon bridges being thrown from bank to bank at more spots than one.

This, then, is that "scientific frontier" described by Ministerial prints, one which ceased to exist as soon as defined. It is true that it possessed the elements of great strength, but it also possessed manifold disadvantages, the majority of which were of our own causing. Easily capable of defence, we wilfully for thirty years ignored all attempts to improve its power of resistance. With the exception of the grand trunk road from Lahore to Peshawur, which is a great work, we neglected to avail ourselves of the road-making talents of our engineers by improving communications with the frontier. Severed as it was from the rest of the empire by a river virtually impassable for troops for five months out of the twelve, we yet, despite the energetic remonstrances of every official who has seen the Trans-Indus districts, absolutely declined to bridge the stream; and until war stared us in the face contented ourselves with a single bridge of boats at Attock, which was of use only during the winter, when the passage by ordinary ferry occupied but a few minutes. Thus the frontier righteously deserved the appellation "a haphazard one," not by reason of its natural configuration so much as by reason of our neglect to improve it.

CHAPTER II.

SUMMARY OF HISTORY OF AFGHANISTAN AND OF OUR RELATIONS WITH THAT COUNTRY.

A HISTORY of Afghanistan would be beyond the scope of this work, but, nevertheless, a brief sketch of our relations with the country, coupled with a short summary of the principal events which have occurred in it, are necessary in order to show the difficulties attendant on any attempt to deal with the pacification of a kingdom which boasts of no settled form of government, and which for centuries has been a prey to internecine feuds.

At the beginning of the eighteenth century Herat and Candahar were in the possession of Persia; Cabul was included in the Mogul Empire of Delhi. It is true that at brief and distant intervals armies, swooping down from the north, had succeeded in occupying Candahar, but we may assume that this arrangement had practically remained undisturbed for two hundred years. In the early years of the century the tyranny and oppression of the Persian governors of Herat and Candahar became so ungovernable that the Abdalis of Herat (now better known as the Duranis) and the Ghilzais in the

neighbourhood of Candahar rose, and throwing off the Persian yoke, actually invaded the territories of the Shah. In this they were favoured by the state of disruption into which that kingdom had fallen, coupled with the fact that at the same time the Turks were invading the western, the Russians the northern provinces. Nadir Shah, a famous robber chieftain, now offered his services to Tahmasp Mirza, who reconquered in succession all the provinces which the Afghans had seized. His assistance was fatal to the Shah, whom he imprisoned, and then, having seized the crown of Persia, proceeded to satiate his boundless ambition by extending his dominions on all sides. Candahar, Cabul, and the Punjaub all came under his sway; and in order permanently to maintain hold of Northern Afghanistan, he planted twelve thousand families in the plains around the Bala Hissar. These men are the ancestors of the Kizilbashis of the present day. In 1747 Nadir Shah died, and during the anarchy which subsequently prevailed, the province of Afghanistan became united into one kingdom under Ahmad Shah, the first King of the Duranis, and chief of the Sadozai section of that clan.* Through

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* Nadir, after the sack of Delhi, carried away the Peacock Throne of the Mogul, the chief ornament of which was the celebrated Koh-i-Noor or mountain of light. In the confusion which followed on the death of Nadir, Ahmed Shah seized the diamond with other treasures, and returning to his own country, founded the Dooranee empire.

The Koh-i-Noor was transmitted from father to son until the last of the descendants of Ahmed Shah was driven from his throne. The blinded Zuman Shah concealed the gem in the wall of his prison.

Shah Soojah, when in exile, and a guest at the Court of the Lion of the Punjaub, had under the severest pressure to relinquish this cherished gem to his inexorable host, from whose descendant it passed into our hands, and is now the chief ornament of our Queen.

his energy and good government a settled form of administration was introduced in the kingdom, which now extended from the Oxus to the Sea of Oman, from Persia proper to the Sutlej. In 1773 Ahmad Shah died and was succeeded by his son Timoor Shah, who transferred the seat of government from Candahar to Cabul. This monarch abstained from fresh conquests, and devoted his time to the consolidation of his kingdom. He died in 1793, and was succeeded by his son Zamaun Shah; but already, in the cold and indolent grasp of Timoor, the sceptre had imprinted upon it the germ of decay. This monarch failed to display the characteristics of either his father or of his grandfather; he failed to trust tribal chieftains, endeavoured to concentrate absolute power in his own hands, and, in order the more readily to do so, attracted men of standing to his Court by the most solemn oaths, and then put them to death. These sanguinary proceedings spread the utmost consternation amongst the people of Cabul, and ere long the flames of internal war spread over the entire kingdom. Four of the monarch's brothers were ruling the distant provinces of his empire, and no sooner had Zamaun Shah moved eastward to stamp out insurrection in the Punjaub than Hamayoon the Elder threw off allegiance and seized Candahar. He was defeated, made prisoner, and, in conformity with the barbarous custom of the Afghans, his eyes were put out. Mahmood, another brother, who was ruling in Herat, now rose, but was in turn defeated. Far worse than this, the Barakzais, the most powerful of all the Durani clans, who until now had furnished the office of hereditary chief

Vazeer, were showing discontent at the treatment of their chief Paendah Khan, and under this man's leadership a plot was formed to dethrone Zamaun Shah and place his brother Shujah-ul-Mulk on the throne; it was discovered, the conspirators seized, and murdered in the most barbarous way. Paendah Khan's sons, however, determined to revenge their father's death, and they joined forces with Mahmood Mirza, who moved eastwards from Herat, and captured Farrah and Candahar; here they were welcomed by the Duranis, who to a man threw in their lot against the cruel tyrant who ruled over them. Zamaun Shah met with a most crushing defeat, and, falling into the hands of his victors, was deprived of his eye-sight. He escaped, however, to Loodianah, where he long lived as a pensioner on the British Government. Mahmood's reign was far from peaceful. First the Ghilzais, then the Kizilbashis, rose in rebellion, and finally dissension rose to such a height that the reigning sovereign was deposed and Shujah-ul-Mulk invited to take the throne. He did so, and Fatteh Khan, son of Paendah, the murdered Great Vazeer, was re-appointed to his dead father's position. Shujah, however, failed to profit by the lessons to be derived from the misfortunes of his brothers. He disgraced Fatteh Khan, who straightway connived at the release of the dethroned Mahmood Mirza and seized Cabul, Shujah flying across the Indus. Fatteh Khan was now king in all but name; he was an able warrior as well as a skilful administrator, and he restored order and enforced the law throughout Afghanistan. His power excited the jealousy of Kamran, the son of Mahmood, who treacherously seized him

and deprived him of his eye-sight. His brothers determined to avenge him, and in this they were so far successful that they wrested Eastern Afghanistan from Mahmood Mirza, who retained only Herat. In 1834 Shah Shujah, who since his dethronement had been living in exile at Loodianah, made a desperate attempt to regain his kingdom, and laid siege to Candahar, then held by the Barakzai chief, Kohandil Khan. Dost Mahomed, who ruled in Cabul, moved down to his brother's assistance and signally defeated Shah Shujah, who after many vicissitudes reached Loodianah once more. The Sikhs in the meantime had availed themselves of the internal dissensions in the Afghan kingdom by seizing the provinces east of the Suliman mountains, and Dost Mahomed's attempts to recover Peshawur were frustrated by his defeat at the little village of Jamrood, near the mouth of the Khyber Pass, on the 1st of May 1837.

In 1809, alarmed at the rumours of a joint French and Russian invasion of India, the Governor-General despatched an embassy under Elphinstone to the Court of Shah Shujah; but whilst the mission was at Peshawur, where the Afghan monarch was then staying, Mahmood Mirza regained his kingdom, and Shah Shujah was forced to seek refuge in our territory. Hence the only permanent result of the Elphinstone mission was that officer's admirable work on Afghanistan.

Again, in 1837, rumours of a Russian alliance with Afghanistan began to gain ground, and the appearance of a Captain Vikovitch at Cabul gave certain reason for alarm. A counter demonstration was attempted, and Sir A. Burnes, who had previously visited the Court of

the Ameer in order to carry out a commercial treaty, was now in all haste despatched to secure the friendship of the Dost. The Ameer demanded certain terms, which would have been accepted had he consented to forego his claims to the Trans-Suliman provinces and dismissed the Russian envoy. He declined to do so, and Lord Auckland then determined on restoring Shah Shujah to the throne of Cabul, in the hope of establishing a friendly power in Afghanistan which should form the first line of defence against the threatened advance of Russia. A treaty was accordingly concluded between the British, Ranjeet Singh the ruler of the Punjaub, and the exile Shah Shujah, under which the latter agreed to cede to the Sikhs all the Afghan provinces now in their possession, whilst Ranjeet Singh promised to co-operate cordially with the British expedition which was about to be despatched to Cabul to dethrone Dost Mahomed and to set up Shujah.

In January 1839 a British army under Sir John Keane assembled on the left bank of the Indus, where it was joined by Shah Shujah. A Sikh force, aided by troops of the Shah's army, officered by Englishmen under Sir Claude Wade, accompanied by Prince Timoor Shujah's son, also assembled at Peshawur, and was ordered to advance through the Khyber whilst the main body moved on the capital *viâ* the Bolan and Candahar. In April 1839, after suffering terrible privations and heavy losses amongst their transport animals from predatory attacks of Beloochees, Keane's army reached Candahar; and on the 8th of May Shujah was crowned in the Mosque of Ahmad Shah. On the 27th of June the

force moved on northwards, and on the 21st of July, after a brief encounter, in which Sir Henry Durand signally distinguished himself, the citadel of Ghuzni was carried by storm, in the absence of a siege-train. The gate was blown open by him under the instructions of the Chief Engineer, Captain Thomson, by having placed a bag of gunpowder against it; our loss being but one hundred and eighty-two killed and wounded. Pushing on to Cabul, the British met with no more opposition, but entered that city on the 6th of August. Dost Mahomed, finding his army thinned by treachery, fled across the Hindoo Koosh. Here began our difficulties. Shah Shujah had ever proved himself incapable of retaining the affection of his countrymen, and now the sight of their sovereign a puppet in the hands of the British was more than sufficient to stir up the fanaticism of such a people as the Afghans. The winter of 1839–40 passed in quietude, but as spring approached the war-cloud broke, and the whole summer and autumn were spent in vain endeavours to put out the smouldering embers of discontent. As soon as the fire was stamped out in one direction it broke forth afresh in another, guided by the master-hand of the gallant and capable Dost Mahomed. In November 1840, however, that monarch saw the English were too strong for him, and possibly judging it wiser to let the tragedy be played out without his intervention, he surrendered to our Envoy after the Battle of Purwan-durrah. Throughout the winter of 1840–41 discontent rapidly increased, and the bitterness towards us was not diminished by the withdrawal of tribal allowances to the chiefs of the Ghilzais. This clan at once

rose, and seizing the passes, cut off all communications between the British cantonments. Why dwell on a story of vacillation, incapacity, and misfortune? The main British army in Cabul was virtually handed over bound hand and foot to cruel, faithless foes; and after a siege of sixty-one days, marked only by indecision and a lack of all military aptitude in our commanders, marched out on the 6th of January 1842, nominally to Hindostan, in reality to death. Five days later one solitary survivor, Dr. Brydon, reached Jellalabad to tell the story of our dire disaster. Fortunately that place, Khelat-i-Ghilzai, and Candahar were held by leaders of a different mould. Sale, Denny, Macgregor, Nott, and Rawlinson nobly did their duty, and upheld our honour. Every attempt to come to terms was treated with scorn; every attempt to carry the British positions by force of arms repulsed in the most gallant manner; and thus our hold over the country was maintained with the bull-dog tenacity of the British race, until in August 1842 General Pollock's avenging army commenced its work of retribution, and Nott, reinforced at Candahar, moved northwards to meet him. On the 13th of September the Afghan army was thoroughly defeated at Tazin, and two days later Pollock entered Cabul without meeting further opposition. On the 17th Nott, having destroyed Ghuzni *en route*, arrived in sight of the Bala Hissar, on the walls of which the Union Jack was proudly floating. Stern justice was exacted, and on the 12th of October the British troops commenced their return march to Hindostan. Dost Mahomed, who in the meantime had been a State prisoner in Calcutta, was

released, and hastily returned to his kingdom, now without a ruler, for the ill-fated Shah Shujah was murdered by his subjects a few days after Elphinstone abandoned his capital. The Dost devoted his time to the consolidation of his kingdom, and with one brief exception, when in 1849 he threw in his lot with the Sikhs, was ever a staunch ally of the Power whose might he had realised when a captive in Calcutta.

In 1850 he recaptured Balkh, and shortly afterwards the whole of Afghan Turkestan was brought under his sway. In 1857 he visited Peshawur, and there, in a city which was closely identified with the Durani power, he entered into an alliance with his old enemies the British. We each had a strong reason for desiring such a friendship. Herat, the capital of Western Afghanistan, was in the possession of Persia, with whom the British were at war; a diversion on the land side would naturally aid our column of invasion moving from the Persian Gulf; and we offered the city to the Ameer as the price of his co-operation. A handsome subsidy was given him, and British officers deputed to accompany the Afghan army in its campaign. The Dost gauged the feelings of his subjects thoroughly. As military officers accompanying a military expedition the presence of these officers would be unobjectionable. As an Embassy from a foreign Power, he surmised that their appearance in his capital would recall the days of the puppet Shah Shujah, and so he declined to receive them in Cabul. The Mission was accordingly located in Candahar, where it was often exposed to the fury of an Afghan mob, and only escaped massacre by its being the channel through which the

monthly subsidy was obtained, and by the judicious conduct of its leader, the present Sir Harry Lumsden, who was supported by Gholam Haidar, governor of the city, heir-apparent to the throne of Cabul, thus demonstrating unmistakeably the folly of establishing embassies in semi-barbarous countries. By the terms of the treaty which closed the Persian war, the Shah withdrew all claims to Herat, and a nephew of the Ameer of Afghanistan, named Sultan Ahmad, was nominated ruler of that province. Dost Mahomed refused to recognise him, and the quarrel culminated in 1863 by the Dost seizing Herat. His triumph was of short duration, for thirteen days after the capture of the city the Ameer died. Afghan-like, Dost Mahomed passed over his eldest son and named Shere Ali Khan his successor. His other sons, indignant at such conduct, rose against their brother, who for five years led a life of extraordinary vicissitudes—now an outcast flying for his life, now a ruler in a solitary outlying province, now *de facto* ruler of the greater portion of the Durani Empire. His sons, men of mettle, aided him by their military aptitude, and at last, in 1868, their continued successes wrung from the British Government a tardy acknowledgment of their father's status as *de jure* as well as *de facto* ruler of Afghanistan. The Indian Government, mindful of the disasters of 1842, were loth to interfere in the policy of regions beyond their own mountain barrier. Unfortunately this policy was guided by no fixed and definite rules. As our relations with Russia became cordial or strained, so our relations with Afghanistan became friendly or indifferent; at one

moment we used our utmost endeavours to conciliate the Ameer, at another he was reminded by a Viceroy that he was but an earthen pot between two iron vessels. Lord Mayo, with his general *bonhommie*, welcomed Shere Ali warmly to our territory and converted him into a fast friend. After this, with the best intentions, we interfered in his domestic affairs, then we alarmed him by our advance to Quettah, when he said to the Sultan's envoy, that "It was a mistake to suppose he was hostile to the British Government, or wished to make war upon England; but the British Government was pressing upon him, and it was necessary that he should not be caught unprepared. They had taken possession of Quettah, and established a force there, looking in at Candahar. If an armed man places himself at the back door of your house, what can be his motive, unless he wants to find his way in when you are asleep?"* And, finally, Shere Ali was driven into open hostility by our accusing him of preaching a religious war against us.† The Eastern Question, now at its height, was a new factor in the case. Russia, finding herself on the brink of war with England, violated her word, and despatched a mission to the Court of the Ameer. That sovereign, wearied with the changeful policy and dictatorial spirit of the British, welcomed it. Such an act was in itself a menace to the peace of our border. The Viceroy, acting under instructions from home, insisted on the reception of a

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* "Through Asiatic Turkey," by Grattan Geary.

† *Vide* Blue Book, Afghanistan, No. 2, of 1872, page 3.

British Envoy at the capital of Afghanistan. Shere Ali reiterated his refusal made to Lord Mayo, and since then repeated to Lords Northbrook and Lytton, and the Mission was rudely repulsed at the mouth of the Khyber Pass in September 1878. The challenge then thrown down was promptly accepted by the Viceroy. Three columns of invasion were concentrated at Peshawur, the entrance of the Kuram valley, and Quettah, and after a feeble opposition offered to the two northern columns the Afghan resistance ignominiously collapsed. The flight of the Ameer, speedily followed by his death, opened the way for a peaceable solution of the Afghan difficulty. Unfortunately we failed to remember that the death of an Ameer has always been a signal for civil war in Afghanistan, and negotiations were opened with Yakoob Khan, as if he were a powerful ruler on a stable throne. These preliminaries were carried out by Bukhtiar Khan, who had formerly been moonshee to the Native Envoy we always kept at the Court of the Ameer. Bukhtiar Khan had made many enemies in the capital, and finally at Shere Ali's own request was removed from his appointment. The chiefs, who yet revered the memory of the late Ameer, disapproved highly of the course followed by Yakoob in conducting negotiations through this man, and his persistency engendered much bad blood. The result, however, was the Treaty of Gandamak, now not worth the paper on which it was written. The clause which provided for the establishment of a British Envoy and suite in Cabul was insisted on by the British Government, and after some demur acceded to by the Ameer. It

was the death-knell of the gallant Cavagnari; the herald of a third Afghan war. Once more a puppet Ameer was presented to his subjects supported by the British. The lessons of '42 and the warnings of Dost Mahomed were forgotten. The fanaticism of a mob excited to frenzy by the denunciations of their priests, culminated in the massacre of our Envoy and his suite. This result had been predicted by more than one Indian statesman. Again British armies were concentrated on the "scientific frontier," and now for the third time the British standard floats over the Bala Hissar, whilst the salient points of Eastern Afghanistan are occupied by British troops.

Such, in brief, is the history of a country whose interests are inseparably bound up with those of British India. Its system of government may be styled a military, aristocratic, and despotic republic, the dictator of which being established for life. This, now, has passed away; whatever may be substituted for it must receive the sanction of the British and must be subordinated to our ideas, or we must abandon the country and leave the people the free choice as to their rulers. Of its population it is impossible to form more than a proximate estimate, for the whole country is split up into innumerable districts, each of which is peopled by its own clan and ruled over by its own chief. Their religion is Mahomedan, and their priests or moollahs possess a great influence, generally for evil, over them. The mass of these clans are Sunni Mahomedans, but in divers places the Shiah element predominates, thus giving rise to endless feuds. Their character differs in no respect from that of the people inhabiting the border

lands between Afghanistan and India, and which will be fully described in a subsequent chapter. They number about five million souls, and as a rule are either agriculturists or shepherds, trade being carried on by the Hindoo settlers and the Lohanis. The chief carriers of the trade are the Lohani merchants, a pastoral race of Afghans, who occupy the country eastward from Ghuzni to the Indus, and who sometimes have had to force their way through the passes sword in hand.*

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* Lohani merchants. The following is an extract from an interesting letter from Sir Bartle Frere, when Commissioner in Scinde, to the Author: —"These men are the great carriers of the Afghan trade. They have their homes about Ghuzni, where they spend the summer. Since the trade *viâ* Tatta and the Indus was extinguished in the latter end of the last century, these people have supplied themselves with seaborne goods *viâ* Calcutta. They descend the passes before they are blocked up by snow, between Ghuzni and the Indus, in vast caravans of eight or ten thousand souls — the whole tribe moving bodily — men, women, children and cattle—their goods being on camels and ponies. Arrived in the Derajat, they leave the aged men, women and children in black felt tents, with their flocks and herds in the rich pastures bordering on the Indus, while the able-bodied men push across the Punjaub with their goods for sale, either in that province or on the banks of the Ganges. The leading merchants precede the main body on dromedaries, taking with them a few samples, letters of credit, &c., &c.—make their purchases at Delhi, Agra, Allahabad, Cawnpore, Mirzapoor, and even Calcutta, and return with them express—collect their families and flocks, and force their way up the passes. Their numbers generally enable them to compound with the tribes of the mountains for a reasonable amount of black mail; but they have sometimes to fight their way. I have heard of the wife of an eminent merchant of this tribe, whose husband had been detained longer than he expected at Delhi, offering the "Kaffila-Bashee (head of the caravan) demurrage at the rate of 10,000 rupees a day, to defer the upward march of the caravan, and enable her husband to rejoin, as she knew that if left behind he would be unable to follow them through the passes, except at great risk of his life and the property he might have with him."—"*The Indus and its Provinces.*" *See also* page 76.

CHAPTER III.

AFGHANISTAN. — GEOGRAPHICAL DESCRIPTION. — GENERAL ASPECT. — MOUNTAINS AND RIVERS. — CLIMATE. — MINERAL WEALTH. — ANIMAL PRODUCE. — VEGETABLE PRODUCE. — FRUITS. — FLORA. — CULTIVATION. — HARVESTS.

If the frontiers of India are insufficiently delineated, those of Afghanistan are a thousand times more vague. Even the eastern boundary, which runs conterminously with ours, is sketched in many parts according to fancy. The northern line has never been traversed in its entirety by any European, and is, I may say, purely imaginary, being founded on the untrustworthy reports of native travellers, whose geographical knowledge is of the smallest. Speaking generally, Afghanistan lies between the thirtieth and thirty-seventh degrees of north latitude, and the sixty-first and seventieth degrees of east longitude; it is bounded on the north by the Oxus, on the south by Beloochistan, on the east by British India, and on the west by Persia. Its extreme length is seven hundred and fifty miles, and its extreme breadth five hundred and fifty miles. Roughly speaking, it contains

two hundred and seventy thousand square miles of country, chiefly mountainous.

Divisions.—The country is divided into the provinces of Cabul, Jellalabad, Ghuzni, Candahar, Herat, and Balkh, or Afghan Turkestan. To these are added those thorny charges the tracts peopled by the Ghilzais and Hazarahs. Its natural division may be said to be—1st, the basin of the Cabul river, including its tributaries, the Logar, Panshen, and Kunar streams; 2nd, the table-lands of the Ghilzais from Ghuzni to Candahar, including the valleys of the Turnak and Arghandab rivers; 3rd, the tributary valleys of the Indus, including Kuram, Khost Dawar, Gomal Thobe, and the Bori; 4th, the valley of the Helmand; 5th, the basin of the Seistan Lake ; 6th, the valley of the Hari Rud; 7th, the valley of the Murghab river; 8th, the tributary valleys of the Oxus, viz. Marmana, Balkh, Khulm, and Kokeha. There is, however, another division of the country, which from a military or a political point of view cannot be overlooked, viz. its division by clans. Thus, north of the Hindoo Koosh we have Uzbaks; south of that range, and peopling the upper valleys of the Murghab, Hari Rud, Helmand, and Arghesan rivers, we have the Aimaks and Hazaras. Inhabiting the country between Herat and Candahar we have the Duranis. From the Cabul river on the north to the upper waters of the Turnak stretches the great clan of the Ghilzais. North of them, between the Panjsher and Cabul rivers, lie the Siahposh Kafirs and their kindred races of Chitral and Dir. To the west of these people dwell the Yusufzais: and the spurs of the Sufaid Koh are the homes of the Afreedees, Orakzais, Shin-

warris, and Momands. South of them come the tribute-scorning Vazeerees, stretching across the entrances of all the valleys from the Kuram to the Gomal rivers, as if to shut off the smaller clans of Jajis, Mangals, Zadrans, Khostwals, and Dawaris from the plains; and beyond these, again, peopling the rugged tract from the Takht-i-Suliman to Pishin, lie the Kakars.

General Aspect.—Afghanistan is throughout its whole extent mountainous, and its general aspect is that of a series of flat-bottomed elevated valleys with narrow strips of cultivation in the vicinity of the numerous streams, which are hemmed in by spurs generally exceedingly bleak and bare. Yet scenes of great beauty are not infrequently met with; the grandeur of some of the defiles to the north of the Hindoo Koosh is not surpassed anywhere, whilst the soft beauty of some of the sheltered glens on the south of that range are spoken of with rapture by every traveller who has visited them. As a rule the ranges to the north are well-wooded with pine and oak; and the valleys here, too, are generally sprinkled with pleasing groves and richly covered with cultivation. The southern portion of the country is more desert in character and but sparsely wooded.

Mountains and Rivers.—Too little is known of the country to attempt to describe with any pretension to accuracy its main features, which are essentially a network of lofty mountain ranges. These give birth to numerous rivers, none of which, however, are of any magnitude. The principal are the Oxus, with its tributaries the Kokcha, the Farkhan, the Kunduz,

Khulm, and Andkhui rivers; the Murghab, which loses itself in the Kara Kum sands south of Khiva; the Hari Rud, which, after watering the valley between the Sufaid and Siri Koh ranges, passes through Herat, and, bearing away to the north, loses itself in the desert to the west of Mashad; the Farrah Rud, Kash Rud, and the Helmand, with its tributaries, all fall into the Seistan Lake; and lastly, the Indus with the many countless streams which drain the eastern slopes of the boundary of Afghanistan.

Climate.—It is a noteworthy fact that the diversities which exist in the climate of the country are due rather to difference of elevation than of latitude. In northern Afghanistan, which consists for the most part either of precipitous mountains or of lofty table-lands, the winter commences late and lasts with great severity for about three months; during this period communication between the valleys is entirely cut off, and the inhabitants often confined to their houses for several weeks at a time. During the summer months the rays of an Indian sun are tempered by the cool breezes borne down from the adjacent snowy ranges. In southern Afghanistan the winter is less severe, though even in Candahar snow occasionally falls; the summer also is very trying here; the climate can by no means be termed salubrious, fevers and bowel diseases being most common, and, like the rheumatism and neuralgic affections of the north, or the eye diseases of the Seistan desert, are distinctly attributable to climatic causes.

Mineral Wealth.—There is no doubt that the northern portions of the country abound in mineral wealth. The

principal geological feature in these districts are igneous rocks, overlaid by secondary oolitic strata. In the Ghorbund Pass, due north of Cabul, a large and valuable vein of red spurry iron ore exists, and within a short distance on the very crest of the hill another of silver. Iron, lead, copper, and antimony are found in the northern ranges. Sulphur, and several of the earthy alkaline and metallic salts, are met with in abundance in various parts of the country. *Coal* is found in Zurmat, Surkhab, and the range running from the Indus to Cabul; its inflammable properties are well known to the natives in the neighbourhood. IRON is found in great quantities in Permuli, in the Vazeeree hills, and near Ghuzni. *Copper* is met with in the Gul Koh in the same locality, and in the Kuram valley. *Lead* is worked in the Hazara mountains and near Khelat-i-Ghilzai. *Antimony* is found in considerable quantities at Shah-Maksud, to the north of Candahar. *Sulphur* is obtained at Herat, in the Hazara hills, and at Pir-Kisri in Seistan; *zinc* in the country of the Kakars. *Nitre* is found all over the southern portion of the country; and *gold* is met with in the northern rivers, where the people earn a precarious existence by washing for it. At Candahar a small, unproductive mine exists. Shortly after the British occupation in the winter of 1877–78 it was farmed out to an enterprising merchant from Hindostan at a very low annual rental.

Animal Produce.—The ordinary domestic animals, such as the horse, the camel, the cow, the buffalo, the sheep, and the goat, constitute the main portion of the wealth of the Afghans. The breed of horses has much

improved within the last thirty years. Ameer Dost Mahomed took great pains to diffuse Arab and Turcoman blood throughout the country ; and several extensive breeding establishments in his reign were dotted over the land. The horses, however, are worked so young that few sound animals are met with. The short-legged country breed, called the *yaboo*, the camel, mule, and buffalo are the great means by which the trade of the country is carried on, carts being unknown in Afghanistan.

Milk and its components, in their separate states, form an important portion of the diet of the Afghans, consequently cows are much prized, those in southern Afghanistan being very like their English relations, both as to size and as to the quantity of milk they yield. *Sheep* are of two kinds, the one with white wool being much prized. Their fleece is manufactured into various home-made stuffs, and of late years has been largely exported. The brown sheep is of a common breed; sheepskin coats are made from them, and their wool converted into thick felts used as cloaks and horse-clothes. In fact, the sheep is a source of considerable profit, and constitutes the main wealth of the nomad population of the country; its milk, together with that of the goat, ass, and camel, forming a staple article of diet. The Afghans are great meat eaters when they can afford it, and prefer mutton to all other kinds of flesh. During the autumn large numbers of sheep are slaughtered; their carcasses, cut into convenient sizes, are rubbed with salt, dried in the sun, and stored for winter use. Oxen, camels, and even old horses that are not likely to weather the snowy months, are treated in like manner.

Bears, leopards, and lynxes are the principal wild beasts, but they are by no means common. Wolves and jackals abound. In the northern mountains the ibex, markhor, oorial, and bara-singha, remind the sportsman of Cashmere; and the wild asses of the southern desert are like their congenitors of the valleys of the Euphrates and Tigris. Pheasants and partridges of the various kinds met with in Northern India abound in Upper Afghanistan, the minaul being especially common in the higher ranges of the Sufaid Koh. Quail and woodcock are met with in due season; and on the streams or marshy grounds, snipe, wild duck of every sort, wild geese, and bittern are plentiful. The sandy deserts of the south are the home of the rock pigeon, as well as of the "seesee" and chikoor, which frequent the rocky ravines in the valleys of the Turnak-Arghesan and Arghandab.

Vegetable Produce.—In the valleys of Afghanistan the soil is exceedingly rich and well adapted for husbandry. Our English vegetables grow there in great profusion, and with care and attention attain to marvellous perfection. Carrots, turnips, lettuce, onions, cabbages, beetroot, spinach, fennel, garlic, and herbs of all sorts abound. Ginger, turmeric, and sugar are grown in the eastern provinces. The castor-oil plant is common all over the country. Madder abounds in Western Afghanistan, and is exported in large quantities to India. Assafœtida and tobacco are much cultivated and largely exported.

Fruits.—The fruits of Afghanistan are the apple, pear, almond, peach, apricot, plum, quince, cherry, pome-

granate, grape, fig, mulberry, and other less delicate kinds too numerous to mention. They are produced in profuse abundance in all the well-cultivated portions of the country, and form one of the chief articles of food, both in the fresh and in the preserved state; in the latter condition they are exported in great quantities. The walnut, pistaccia nut, edible pine, and rhubarb grow wild in the northern and eastern highlands, and are also largely exported. Various species of the jujube tree, mastic, plantains, marjoram, basil, borage, the wild endive, and mushrooms are all used as articles of diet.

Flora.—In Southern Afghanistan, the mulberry, poplar, willow, and ash are met with in cultivated districts. In sandy spots the dwarf tamarisk prevails; its thin long twigs are worked into baskets and mats. The mimosa and various kinds of acacia are also met with here, and scattered here and there between patches of stunted vegetation may be found varieties of grasses, the absinthe and wild rue, the thistle, different kinds of orchids, and the iris.

In the mountainous districts of the north the vegetation is characterised by an abundance of large forest trees. Among them are the deodar, the spruce fir, the long-leaved pine, the cluster pine, the edible pine, the larch, hazel, yew, and juniper tree, the walnut, wild peach, wild almond, and wild olive. Growing under the shade of these are found several varieties of the rose, the honeysuckle, the currant, the hawthorn, and rhododendron, with a luxuriant herbage cropping up all around. Beneath this upper belt, the lemon and wild vine, the oak and dwarf laburnum, the rock rose, wild

privet, jujube tree, dwarf palm, acacia, bignonia, sissoo, and verbena. The lowest or terminal ridges are as a rule very bare of vegetation; shrubs are occasionally met with, trees never; our own English field plants, however, gladden the eye, long a stranger to violets, blue-bells, harebells, daisies, buttercups, tulips of various hues, daffodils, hyacinths, ferns, and mosses.

Cultivation.—The cultivated land is of two kinds, that irrigated by artificial means called *Abi*, and that which is solely dependent on rain for its supply of water, which is styled *Lallam*.

Three methods are in vogue for watering the land artificially. 1st. In hilly districts, water from springs is led by small channels to level spots well adapted for cultivation. These often wind for many miles along the sides of intervening hills before entering the fields. 2nd. Canals are constructed by which the waters of rivers are diverted to cultivated districts often situated from twenty to thirty miles from the rivers whose waters they drain. 3rd. By *Karez*. These are subterraneous aqueducts uniting several wells and conducting their waters in one stream to the surface of the earth at a lower level. They are very common in the southern and western districts of Afghanistan, where they have redeemed large tracts of land from the desert. A shaft, five or six feet in depth, is sunk near the spot where the water is to issue from the surface, and at regular intervals of from twenty to fifty yards in the direction of the hill whence it has been previously ascertained that a supply of water will be obtained, other shafts are sunk, and the bottoms of all are connected by slightly sloping

galleries. The depth of the shafts of course increases with their distance from the original one, according to the slope of the ground. Their position is marked by mounds of earth and they are generally kept closed, being opened occasionally for the purpose of cleansing the galleries. Some *karezas* afford a constant supply of water for ages, while others become exhausted before they have paid the cost of construction. The most ancient, and perhaps the finest in Afghanistan, is that said to have been made by Sultan Mahmud of Ghuzni, and which now waters the garden of his tomb and the surrounding fields.

Barley and Indian corn are generally grown on *Abi*, and wheat on *Lallam*, land.

Harvests.—As in India, so in Afghanistan, there are two harvests in the year. One of these is sown in the end of autumn and reaped in summer; it consists of wheat, barley, peas, and beans, with vetches and lentils. This is the most important crop in the greater portion of the country. The second harvest consists of rice, millett, bajrah, Indian corn; it is sown in the end of spring and reaped in the autumn. There is another sort of cultivation, chiefly in the neighbourhood of large towns, to which much importance is attached, namely, melons of various sorts, cucumbers, pumpkins, and gourds.

CHAPTER IV.

AFGHANISTAN.—MANUFACTURES, SILK, POSTEENS, CHOGAS, FELTS, ROSARIES, WINE.—TRADE, WANT OF ROADS, TOLLS, AMOUNT OF TRADE, COMPETITION WITH RUSSIA, NECESSITY FOR COUNTERACTION.

The manufactures of Afghanistan are few and unimportant; silk of an inferior description, posteens, or sheepskin coats, chogas, or camel-hair cloaks, felts of various kinds, and rosaries are the principal industrial products.

Silk, in Eastern Afghanistan, is chiefly produced in and around the city of Candahar, and in villages on the banks of the river Argandab, where mulberry trees are most abundant. The whole of the silk is monopolised by the Governor, to whose agents alone the producer may sell the material. Some few in return receive cash, but the majority have their names and the amount of silk sold entered in a book, and a corresponding remission is made in their taxes. Eggs are supplied by the agents gratis to those who choose to apply for them. No pains are taken with regard to the diet of the silkworms, the quality of the silk is consequently deterio-

rating; and as the villagers profit very little by the work they take no interest in it, and the number of breeders is rapidly diminishing. In Western Afghanistan Herat is the chief seat of the silk trade; there more pains are taken in the selection of the food, and the consequence is that the quality produced is altogether superior to that at Candahar.

Felts are also largely manufactured in the great cities, the better sort being composed entirely of sheeps' wool, the common of goats' and camels' hair mixed with wool, These felts are generally used as carpets, cushions, bedding, horse clothing, overcoats, and linings for tents.

Posteens.—The manufacture of sheepskin coats is one of the most important of the industrial occupations of the people in towns and cities of Afghanistan. Of late years the trade has greatly increased owing to the demand created by the native army of the Punjaub, by which it has been very generally adopted as a winter dress. The skins are cured and dyed until they assume a deep yellow hue, when they are cut into strips about two feet long by six inches wide, and then made up by tailors into coats, the wool being inside. Usually the edges and sleeves are ornamented more or less richly with a deep embroidery of yellow silk, which is worked on, after the coat is finished, by women. The price of a posteen varies from two to fifty rupees according to size and finish.

Chogas.—Though more adapted for the cold weather, the choga is very generally worn all the year round. It is a loose cloak, not unlike a gentleman's dressing-gown, and is perhaps the commonest garment met with

in Afghanistan. Chogas are of three kinds—that made from material woven from the wool of the reddish-brown sheep is the cheapest, whilst that made from the soft under-hairs of the highland goat is the most expensive; the price of the former averages from two to five rupees, of the latter from eighty to one hundred. The camels' hair or Shuturi choga runs from three to eight rupees in price.

Wine.—A red wine is now largely produced in Cabul, and owing to the profusion of vines which abound in the northern districts of Afghanistan, this promises to become one of the great exports of the country. The process of making it is very simple. The juice of the grape is squeezed into a large earthenware vessel or masonry reservoir by treading under foot. From this the expressed juice flows through a small hole into a large earthen jar with a narrow opening at the top. When nearly full the mouth of the jar is closed and the juice allowed to stand for forty days. At the expiration of this time an empty flagon of very fine porous clay is floated on the surface of the wine, which it gradually absorbs till full, when it sinks. The flagon is then taken out, its mouth closed air-tight, with a fresh kneading of clay, and it is placed in a cool place to ripen. If kept for three years it is said to acquire great body and flavour.

Rosaries are extensively manufactured at Candahar from a soft crystallized silicate of magnesia, which is quarried from a hill at Shah-Maksud, where soapstone and antimony are also found. The most valuable are those of a straw-coloured semi-transparent stone resem-

bling amber; these are largely exported eastward to Hindostan, westward to Persia, and even to Mecca.

Trade.—The trade of Afghanistan enters the country by the following routes:—

1st. From India by the Khyber, Kuram, or Gomal passes;

2nd. From Scinde by the Bolan, Moolla, and other passes;

3rd. From Eastern Turkestan by Chitral, Kunar, and Jellalabad;

4th. From Bokhara, either by Merv and Herat, or by Karshi, Balkh, to Cabul;

5th. From Persia by Mashad and Herat.

None of these roads are practicable for wheeled carriages, and the goods are transported principally on the backs of camels.

Tolls.—Heavy tolls are levied, not only at Afghanistan Government stations, in order legitimately to raise the revenues of the country, but at various places *en route*, where the independent tribes levy black mail on the peaceful trader. The Gomal Pass alone is an exception to this rule. Here the great soldier merchants, the Provendahs, force their caravans through, *vi et armis*, and decline to pay tribute to anyone but the lawful Ameer or his duly authorised officers.

In the Khyber Pass, between Peshawur and Cabul, Afghan Government tolls amounted to about eleven shillings a camel-load; in addition to this special bargains had to be made with the robber custodians of the pass before the caravan was permitted to proceed.

Between Cabul and Balkh customs tolls of five shillings per camel-load were demanded, and on leaving the

capital a one per cent. *ad valorem* duty cleared the goods to Bamian.

Between Cabul and Herat the tolls levied *en route* amounted to twenty shillings per camel-load, including transit dues of four shillings at Ghuzni and Candahar.

Amount of Trade.—Any statement of the actual value of the trade of the country must necessarily be based on such meagre and imperfect data as to be almost unreliable. Sir R. H. Davies, K.C.S.I., when Secretary to the Punjaub Government, prepared some elaborate statistics, which are, of course, somewhat out of date, and consequently scarcely trustworthy. He estimated the gross exports from Afghanistan to India as amounting to three hundred and three thousand five hundred and thirty-five pounds sterling, and the imports to three hundred and eighteen thousand three hundred and eighty-three pounds. The late Colonel Graham, the Commissioner of the Derajat, estimated the trade which entered his district through the Gomal Pass at close on half a million sterling, and there is every reason to believe that Sir H. Davies' figures might now be more than doubled without fear of exaggeration before recent hostilities commenced.

Russia has, however, monopolised to a great extent the Central Asian trade. Goods which in former days reached the markets of Bokhara from Europe *viâ* Hindostan and Cabul now arrive *viâ* Orenberg and Tashkend. We have ourselves to blame for this. Instead of sending embassies to ephemeral potentates, had the communications with our North-West Frontier, strategically necessary, been completed immediately after the annexation of the Punjaub, the commercial benefits

both to Afghanistan and to India would have been incalculable. We have now to win back a trade that has passed to other hands; and until the railway termini at the Khyber and the Bolan are connected with the cities of Cabul and Candahar by good macadamised roads (the latter, it is hoped, by a railway), fit for wheeled traffic, we cannot hope to make much headway. The abolition of the black mail levied by the mountaineers, and of the transit dues at Ghuznee and Girishk, will of course cheapen the cost of conveyance; and the mere fact that the distance on which goods will have to be conveyed by pack animals will be decreased by the long dreary marches through the Suliman ranges and the Punjaub, will necessarily enable us to compete on exceedingly favourable terms, both as regards time and cost of transit, with our Muscovite rivals.

In this and the preceding chapter enough has been written to prove that Afghanistan is a virgin country capable of immense development. Hitherto everything has been against it. For centuries, as far as we know for all time, it has been the scene of chronic wars; never has it been blessed with a settled government. It is peopled by fierce warlike tribes who live by plunder and who revel in bloodshed; to them trade is a degradation, and the man who plunges into commercial pursuits is despised almost as an outcast. It has been ruled by tyrants who approach the Turkish Pashas in rapacity, and who, by their unjust extortions, have stifled internal trade and ruined home manufactures.

The ingenuity with which the Afghans constructed *karez* for purposes of irrigation show them to be pos-

sessed of more than the mere rudiments of mining knowledge. Mineral wealth lies untold beneath their feet. The soil, more especially in the northern valleys, is peculiarly good, though enfeebled through long neglect. A little rest, and slight fertilising aids to nature, will renew its old richness, when, instead of growing crops merely sufficient for home consumption, it might be converted into one of the granaries of India. The cultivation of the vine might with ease be increased a thousandfold; when our large English population of India, instead of turning to Bordeaux for their light wines, might obtain them from the valleys of Afghanistan. The climate of the Himalayas exists in the Hindoo Koosh, and there is reason to believe that the large and ever-increasing tea trade of India may find its counterpart in the neighbourhood of Cabul. The Afghans are great tea-drinkers. Even at the enormous price now demanded, thousands of pounds' weight annually are imported into the country. Were the plant grown there, millions would be consumed. The establishment of looms in the principal cities would obviate the necessity for the export of her wool and cotton, and with care and attention the silk trade might be greatly extended.

To say that Afghanistan is a country of rocks and stones is only partially true. Until now it has lain under the curse of Islam and its attendant tyranny and lack of enterprise. Its people are energetic, its soil is fertile, its mineral wealth is boundless; it needs but guiding spirits to point out how all this wealth can be utilised, and the infusion of a certain amount of

English labour to direct and English capital to furnish the motive power, and the whole aspect of the country will be changed. Thirty years ago there was not a single steam loom in India; now millions of spindles are at work. Thirty years ago there was not a single mile of railway or of telegraphic line open in the whole of the Peninsula of Hindostan; now thousands of miles of the one and of the other stretch from shore to shore. Our merchants and capitalists are ever ready to follow in the wake of our armies; and he is a bold man who would prophesy that before the close of the nineteenth century trains propelled by Cabul coal will not be running daily from that city to Candahar, or that the people of the country will not be wearing cloth woven in the looms of their own towns from the wool of their own sheep.

CHAPTER V.

THE INDEPENDENT BORDER TRIBES.—THEIR CHARACTER.—SIR R. TEMPLE'S OPINION.—CONDUCT TOWARDS THE BRITISH.—OUR TREATMENT OF THEM.—FRONTIER EXPEDITIONS.—FRONTIER CIVILIANS AND SOLDIERS.—EVENTUAL ABSORPTION OF BORDER LANDS INTO BRITISH TERRITORY.

The frontier of Afghanistan may be said to run parallel to that of British India, and between the two lies a broad tract of mountainous territory, through which the writ neither of Ameer nor Empress dare run. It is peopled by savage tribes of a common origin, with a common creed and common tongue, but between whom exists feuds which are carried on with a bloodthirstiness unknown even to the Sardinian vendetta. These tribes are jealously proud of the independence of their country, and no traveller, save he who assumes the garb of a religious mendicant, dare venture across their border. The extent of this frontier is fully eight hundred miles, and that portion of it immediately abutting on our own territory is the home of upwards of thirty independent clans, who are again subdivided into innumerable sections. Not only is clan divided against clan, but village against village—aye, family against family; and to attempt even

a brief sketch of the ramifications of our fanatical neighbours would be the work of years.

Facing the Hazara district, on the slopes of the Black mountain, lie the Cis-Indus Swatis, the Akazais, Chagarzais, Hassanzais, and Turnoulis.

Around the Peshawur valley dwell the Madakhel, Jadoons, Bunairwals, Swatis, Ranizais, Utmankhels, Momands, and Afreedees.

The Kohat district is bordered by Afreedees, Orakzais, Zaimookts, Tooris, and Kabul Khel Vazeerees.

Bunnoo is surrounded by Kabul Khel Vazeerees, Dawaris, and Batanis.

Dera Ismail Khan is bounded on the northern half of its border by Batanis, behind whom lie the great Mahsood Vazeeree clan; whilst the mountains fringing the southern half of the district are peopled by Sheoranees, Usleranees, and Kasranis.

The hills facing Dera Ghazee Khan and Rajanpore are the homes of the Bozdars, Khetrans, Kosahs, Lagharis, Gurchanis, Maris, and Boogtees, offshoots of the Belooch tribes.

The frontiers of Scinde run parallel to that of Beloochistan, and as the Beloochees are not imbued with the strong religious fanaticism of the Pathans, and as a rule pay the most implicit obedience to the orders of their chiefs, differences between them and the English have been infrequent.

In 1855 Mr. (now Sir) Richard Temple wrote of our neighbours: "Now these tribes are savages, noble savages perhaps, and not without some mixture of virtue and generosity, still absolutely barbarians nevertheless.

They have nothing approaching to government or civil institutions. They have for the most part no education. They have nominally a religion ; but Mahomedanism, as understood by them, is no better, or perhaps is actually worse, than the creeds of the wildest race on earth. In their eyes the one great commandment is blood for blood, and fire and sword for all infidels, that is, for all people not Mahomedans. They are superstitious and priest-ridden. But the priests are as ignorant as they are bigoted, and use their influence simply for preaching crusades against unbelievers, and inculcate the doctrine of rapine and bloodshed against the people of the plains. They are very avaricious; for gold they will do almost anything. They are thievish and predatory to the last degree. The Pathan mother often prays that her son may be a successful robber. They are utterly faithless to their public engagements, and it would never occur to them that an oath on the Koran was binding if against their interests. They are fierce and bloodthirsty, and are never without weapons. When grazing their cattle, when driving beasts of burden, when tilling the soil, they are still armed. They are perpetually at war with each other. Every tribe and tribal section of a tribe has its internecine wars ; every family its hereditary blood feuds; and every individual his personal foes. There is hardly a man whose hands are unstained with blood. Each tribe has a debtor and creditor account with its neighbours, life for life. Reckless of the lives of others, they are not sparing of their own. They possess gallantry and courage themselves, and admire such qualities in others.

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"To their mind hospitality is the first of virtues; any person who can make his way to their dwellings will not only be safe but will be kindly treated; but as soon as he has left the roof of his entertainer, he may be robbed and killed. They are not averse to civilisation, and are fond of trading, as also of cultivating, but they are too fickle and excitable to be industrious in agriculture or in anything else. They will take military service, and, when commanded by men who understand their character, make admirable soldiers. Such briefly is their character, with that mixture of vices and virtues belonging only to savages."

What, now, has been their conduct towards us? They have kept up old quarrels, or picked new ones with our subjects in the immediate vicinity of their hills. They descended from their mountain fastnesses and fought their battles out in our territory. They have plundered and burnt our villages, and slain our subjects. They have intrigued with the disaffected, and tempted our loyal subjects to rebel. For ages they have regarded the plains as their preserves, and its inhabitants as their game; and even when the strong arm of England has cast its protection over the Trans-Indus province, they have scoffed at our might and harried the border as of yore. They have fired on our outposts, waylaid and massacred small detachments of troops, and have murdered British officers in our own cantonments. They traverse at will our territories, enter our villages, trade in our markets, but few British subjects and no Englishman would dare to enter their country.

In return for this—what, then, has been our conduct

towards them ? It has recognised their independence ; it has asserted no jurisdiction over them ; it has claimed no revenue from them. It has confirmed whatever fiefs they held within our territory; and until the Treaty of Gandamak, when political considerations necessitated the occupation of certain strategic points in order to dominate the roads to Afghanistan, it has never extended its jurisdiction one yard beyond the old limits of the Sikh dominions. It has freely permitted the hill people to settle, to cultivate, to graze their herds, and to trade in its territories; it has accorded to these the same protection rights and privileges as to its own subjects. Its markets have been thrown open to them; all restrictions on trade and transit, all duties except that on salt, have been remitted for them. It has freely admitted them to hospitals and dispensaries, which have been gratuitously established at many frontier villages ; its medical officers have attended thousands of them in sickness and sent them back to their mountain homes cured.

It is difficult to see what more we could have done in order to conciliate our neighbours. Yet despite all these efforts, despite the fact that thousands of them have taken service in our ranks and seen the justice and beneficence of our rule, and that tens of thousands annually visit our markets for the purposes of trade, they would appear from recent events to be as hostile toward us now as they were thirty years ago. With monotonous pertinacity, as winter approaches, solitary cases of cattle-lifting foretell but the recurrence of raids on a larger scale, which occasionally assume such proportions that punitive expeditions into

their territory become necessary in order to bring them to reason. Of the tribes enumerated on page 47 we have been compelled, since the annexation of the Punjaub in 1849, to punish no less than nineteen; and since that year twenty-six expeditions have been sent across the border to vindicate the outraged rights of subjects whom we have debarred from the revenge and retaliation they formerly exercised.*

Date.	Offending Tribe.	Commander.	Casualties.	
			Killed.	Wounded.
1849	Swatis of Lundkhor .	Colonel Bradshaw, C.B. .	9	45
1850	Afreedees of Kohat Pass .	Sir Charles Napier . .	19	74
1851	,, ,, ,,	Captain Coke . . .	11	25
—	Vazeerees of Miranzai .	. . . . .	1	18
—	Momands	Sir C. Campbell . .	3	19
1852	Swatis of Black Mountain	Colonel Mackeson . .	3	17
—	Utmankhel . . .	Sir Colin Campbell . .	14	48
—	Vazeerees of Kafir Koti .	Captain Nicholson . .	23	5
1853	Bori Afreedees . . .	Colonel Boileau . .	8	33
—	Sheoranees . . .	Brigadier-Gen. Hodgson .	5	42
—	Kasranees	Brigadier-Gen. Hodgson .	11	31
1854	Momands	Sir Sidney Cotton . .	2	16
—	Afreedees	Colonel Craigie, C.B. .	9	39
1855	Orakzais	Brg.-Gen. N. Chamberlain	10	23
1857	Bozdar Beloochees . .	Brg.-Gen. N. Chamberlain	12	49
—	Narinjee	Sir S. Cotton . . .	6	36
1858	Sittana	Sir S. Cotton . . .	6	28
1859	Cabul Khel Vazeerees .	Sir N. Chamberlain . .	2	19
1860	Mahsood Vazeerees . .	Sir N. Chamberlain . .	93	286
1863	Umbeyla	Sir N. Chamberlain . .	238	908
1868	Black Mountain . .	Sir A. Wilde . . .	20	109
—	Bazoti	Major L. B. Jones . .	11	44
1869	,, ...	Colonel C. P. Keyes, C.B.	8	33
1872	Dawar	Brg.-Gen. C. P. Keyes, C.B.	3	16
1878	Afreedees	Brg.-Gen. C. P. Keyes, C.B.	18	78

Still, when we look at the Punjaub and Beloochistan, and think of the wonders we have accomplished in reclaiming their wild inhabitants, we thank God and take courage.

When will a frontier Napier spring up to hand

* The Scinde frontier has been long exempt from raids, and the Khan of Kelát has been our firm ally.

down with glowing pen to posterity the gallant deeds Englishmen have performed in these far-off Afghan hills? The heroism of officers has been equalled if not eclipsed by the loyal devotion of their native followers. The English army has had no better school for its officers than the Punjaub Frontier Force; it has been the cradle not only of the most distinguished Indian officers of the present day, but from its ranks have sprung the most efficient regiments of the Bengal army. In the dark days of 1857, when all England stood aghast at the cloud which hung black over India, the custodian of the Punjaub was a man who, under the garb of a civilian, possessed the keenest qualifications of the soldier. He knew the giants he had under himself; and whilst the pacification of his own province was entrusted to his lieutenants, Montgomery, McLeod, George Barnes, George Ricketts, Douglas Forsyth, and other civilians whose courage and devotion equalled that of their brethren of the sword, worthy followers of such a chief, he turned to his military subordinates for help in raising from amongst our quondam enemies, the Sikhs and Afghans of the frontier, a force to quell the mutiny. The subalterns of those days have developed into the generals of the present. Of all the names which stand out in prominent relief in the history of the Indian Mutiny none show up bolder than frontier heroes —John Nicholson, Neville Chamberlain, Coke, Probyn, Lumsden, Hodson, John Watson, Walter Fane, Sir Chas. Brownlow, the Battyes, Daly, Wilde, Vaughan, Merewether, the Greens, Henry and Malcolm, worthy lieutenants and successors of John Jacob, Sir Sam Browne,

Keyes, and others too numerous to mention. Some, alas! have gone over to the majority; but many are still left, bemedalled and covered with scars to testify to the worth of their past services.

In sounding the pœans of the Wardens of the Marches, their faithful henchmen must not be forgotten. Azeez Khan, of the 5th Punjaub Infantry, who fell in the attack on the Peiwar last December; Ressaldar Mahomed Khan, of the Guides, who died over Wigram Battye's body to save it from violation; Subadar Ram Sing, of the 3rd Punjaub Infantry, who perished in a noble attempt to save his commanding officer, Captain Ruxton; Ressaldar Sadut Khan, of the 5th Cavalry, who, on hearing that the Wazeerees were threatening, collected every available man from the neighbouring outposts, and moving out to the foot of the hills defeated four thousand of them with crushing slaughter; Habeeb Khan, of the 1st Punjaub Infantry, for many years the right hand of General Keyes, and whose counsel in peace was no less valuable than his gallantry in war. Others there are in hundreds—privates as well as native officers—whose names deserve to be placed on permanent record among the rolls of our country's heroes.

Besides the tribes who from their proximity to our frontier have been thrown into closer connection with us, there is behind them another strip of territory in which dwell clans if anything more fanatical and barbarous than our neighbours, and whose persistent attentions to our lines of communication in the Afghan war have been the cause of much loss to us. The men of Kunar, the Shinwarris, Chakmanis,

Munguls, Jajis, Zadrans, and Kakars, will all now be brought into contact with our rule. We must expect fierce opposition from them. Our cantonments, which must in the immediate future most assuredly guard the road from Cabul to Candahar, will suffer from their depredations, and the punitive expeditions which have sullied the peace of the eastern slopes of the Suliman range, will undoubtedly be moved up the western slopes, to spread amongst these savages the power of that great civiliser the Sword.

The pacification of this broad tract of mountainous country will necessarily be a work of time; but it is no superhuman task we have before us. Year by year the peace of the Trans-Indus provinces has been more assured; year by year the necessity for repressive expeditions has grown less frequent; and long periods of peace have occurred in a country which less than half a century ago was in a chronic state of anarchy and bloodshed. The labour before us in 1880 is less than that which faced us in 1849. We have soldiers and civilians proficient in the languages of the Afghans (a sure avenue to their hearts), and we have thousands of men in our ranks who come from the very country we are about to occupy. Resistance is to be expected; but when once these tribes have seen their powerlessness to resist us, they will submit, sullenly enough, doubtless, at first; but eventually they will see, even as the Yusufzais and Khuttucks and Murwattees, that the blessings of peace and a settled rule more than counterbalance the pleasures of robbery and assassination. The grand drawback to all this is the bill we shall have to pay.

CHAPTER VI.

THE PASSES.—MEANS OF COMMUNICATION.—LORD NAPIER OF MAGDALA.—SIR HERBERT EDWARDES, LORD SANDHURST, LORD LAWRENCE, SIR BARTLE FRERE, SIR R. MONTGOMERY, SIR DONALD MCLEOD, SIR H. DURAND, SIR R. TEMPLE, ETC.—FORTS.—BRIDGE AT ATTOCK.

Ever since the star of the Great Napoleon was at its zenith, and his boundless ambition threatened the foundations of our Indian Empire, we have recognised, by the repeated despatch of missions and the establishment of embassies to the Courts of Teheran and Cabul, our sense of the value of maintaining cordial relations with the border lands of our north-west frontier of India, and the danger that menaces our empire from that quarter. Statesmen and soldiers alike agree that this is our one vulnerable spot; and ever since the Punjaub campaign of 1849 brought our frontiers conterminous with those of the Ameer, every successive general who has commanded the Trans-Indus districts has pressed upon the Government the absolute necessity of scientifically strengthening a naturally strong frontier.

In 1857, as the mouthpiece of an influential deputa-

tion to Lord Palmerston, in favour of the Euphrates and Indus route to Central Asia, I pointed out the importance of railways to the Bolan and Khyber Passes. In support of these views, I would refer to the following extract from the speech of Sir Bartle Frere, then Commissioner in Scinde, at the meeting of the Scinde Railway Company in February 1857. "Mr. Andrew," said that gentleman, "had adverted to the military and political importance of the line. For his own part, he did not think it was possible to overrate its importance. If the war with Persia had been destined to continue, the immense value of this undertaking, and those with which it was in connection, would have been singularly demonstrated. The practical value of the railway was to increase the available power of every ship and of every man employed in military and naval operations. In reference to the Punjaub, the capacity of moving troops to a given point was of immense importance. If they looked at the map, they would see that they had a mountainous range, between which and our possessions the Indus formed a natural boundary, and the Company proposed to make a line along its level plains. In a military point of view, the advantage would be this, that if the Khyber Pass should be closed to our forces, they could be moved with rapidity to the Bolan Pass, and in either case the enemy would be taken in flank or in rear. In the meantime, the Euphrates Valley Railway would give them the command of the seaboard of the Persian Gulf, and not only this, but the completion of that railway would practically make

Chatham nearer to the point of action in the Persian territory than any military force that could be brought to bear upon it from Central Asia."

The same views as to the passes had been powerfully advocated in 1856 by the author of "Our North-west Frontier," in the following passages:—

If we are to meet the coming struggle in the manner of statesmen entrusted with the destinies of the East, we must leave all petty aggression, all petty retaliation, and permit no power on earth to swerve us from the sole disposition that can and will secure what is, in truth, the one and *sufficient object* of this, on our part, grand defensive war. We must, that is, at once and for ever, secure the North-western Frontier of our Indian Empire. Unless all measures contribute, and are subordinated to this great line of defence, they can be no more than palliatives, increasing in cost, as the evil to be palliated approaches. But immediately the mind grasps the question in all its bearings, and, discarding all small measures and aggressive expeditions, realises distinctly that the object in view is not of an aggressive, but of a defensive nature, then it arrives at the just conclusion that our preparations should be made at the gates of India, at the passes of the Bolan and the Khyber. Establish a sufficiently large military body at some point immediately above the Bolan Pass, and a second at Peshawur*; confide our diplo-

* Peshawur. This is the most northerly and the most important of all the trans-Indus districts. It consists of a well-watered valley, 1,928 square miles in extent, closed in on all sides by a more or less continuous range of high

matic relations along the entire frontier to one good and able man, and then mark what would be the result. The gates themselves would be closed and defended; friendly relations would be gradually extended throughout Afghanistan; that vast tract of country which lies between our frontier and the present position of the Persian army, along the line of Herat, would become our shield. Without assuming direct military control of the Afghan and Belooche Irregulars, we might so leaven their mass as to render them a most formidable host of light troops, or Eastern Cossacks, and capable of destroying in detail, by force or famine, among their own mountain passes, any army that could be advanced from the westward.

"Or should the invaders attempt to approach the head of the Khyber, the force at the head of the Bolan

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hills, except towards the east, where for a distance of about 20 miles the Indus forms its natural frontier. It is bounded on the north by the Swat and Bunoo tribes of the Mahabun mountains, on the west by the Afridis and Momands of the Khyber, on the south by the Afridis of the Kohat Pass and by the Khuttuks of the Narai Sir.

The general appearance of the valley is one of great beauty; at the right season of the year it is a mass of verdant and luxuriant vegetation, relieved by the meandering of the numerous canals and long lines of mulberry trees, whilst in the distance rise gloomily the bare mountains of the Khyber, relieved in their solemn grandeur by the snowy peaks beyond. The Cabul river, which flows into the Indus at Attock, runs down the centre of the valley, and it is joined in its course by streams from the Afridi and Momand hills, so that the whole valley is well irrigated by perennial streams of considerable size. The air in the valley is as a rule still and stagnant, and this, coupled with the moist nature of the soil, makes it an unhealthy quarter. The average rainfall is only about 11 inches. Sheep and cattle are extensively reared, but horses are chiefly imported from Afghanistan.

The district fell into our hands after the battle of Goojerat, when Sir Walter Gilbert pursued Dost Mahomed's broken followers to the very portals of the Khyber.

would quickly operate upon its flanks and rear, by a march along a line shorter, and capable of being rendered easier, than that from Herat to the Khyber. The invaders' supplies would be wholly cut off, and it would experience a fate similar to that endured by our own army in the same hostile tract.

"But should the invaders reach the head of the Bolan itself, they would fall under our force then established at the entrance of the Pass, holding free communication with the plain of the Indus, and capable of being easily and rapidly reinforced to any required extent. Such a position for an invading army would inevitably end in its absolute destruction. It could not possibly advance. Its supplies and communications would be cut off by the tribes in its rear. Not a man could stray a mile from its camp and live. It must either be starved as it stood, or it must retreat; but to do the latter would be to have the entire Afghan population down upon its flanks, and to have our own force close upon its rear. Those who remember the position of Napoleon's army at the fortress of Bourg, and can imagine to themselves what that position would have resulted in had the fortress been really impassable—had the Austrian main body been close behind it, and had Napoleon's own supplies and communications been absolutely cut off by hostile mountaineers,—those may picture to themselves the dilemma of a Russo-Persic force at the head of the Bolan when wise precautions should have been taken by us, for rendering that head what it might and ought to become."

On the 13th December 1878 General Hamley, in a lecture at the Royal United Service Institution, gave the weight of his authority to views very similar to those advocated by me nearly a quarter of a century ago.

In 1849, when we annexed the Trans-Indus Provinces, country roads, unbridged from end to end, radiated from Lahore to the Khyber, the Kuram,* and the Gomal passes, whilst a sandy track connected Mooltan with the capital. A road of similar description ran through the Sikh frontier posts of Kohat, Bunnoo (Dhalipgarh), Dera Ismael Khan, Dera Ghazi Khan, and so southwards to the territories of the Ameer of Khyrpur. At points where these roads crossed the Indus, or at the *debouchées* of the principal passes, forts, formidable for the style of enemy likely to be encountered, were constructed. Thus a double chain of works guarded the outlying province of the Sikhs; and when we took over the district some of these were adapted for our own use, others fell into decay. Peshawur, Dhalipgarh, Dabra, Harraud, are amongst those which we found thrown forward to

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* Kohat. This district is separated from that of Peshawur by the Afreedee Hills, through which the famous Kohat Pass runs. For the right of way by this road we pay the border tribes an annual sum of Rs. 14,000, but under new arrangements it is possible we may assert our undisputed right to all and every portion of the great military highway which must connect Peshawur with Scinde. This break in our communications is a strategical error, and a blot on the political administration of the Frontier. The district is bounded on the north by the Afridi Hills, on the west by the Shutargardan pass, on the south by the Salt range, separating it from Bunnoo, and on the east by the Indus. As the Kuram valley has but lately been added to the district, its area is at present unknown.

check the inroads of the tribes; whilst Attock, Isa-Khel, Trag, and Akalgarh guarded the ferries of the Indus. How stood the frontier when in 1878 we undertook a fresh Afghan war? Some of the forts, as Attock, Peshawur, Bunnoo, and Dera Ismael Khan had been strengthened, others were mere heaps of ruins. New ones, however, had sprung up as from time to time local disturbances necessitated the exercise of extra pressure on recalcitrant tribes. Little trouble had been taken to make the system of border defence worthy of our rule. Let me now turn to the improvements made in the means of communication. The main road from Lahore to Peshawur is metalled, but the Indus is still unbridged, although so long ago as 1849 Lord Napier of Magdala, then known as Major Robert Napier, Chief Engineer in the Punjaub, strongly urged the construction of an iron bridge at this point—a photograph of his design, which that distinguished strategist gave me many years ago, is now in my possession. In 1857, Sir Herbert Edwardes, who, as Commissioner of Peshawur during the mutiny, was keenly alive to the danger that threatened our rule from this great gap in our main line of communications, addressed himself with energy to the reparation of the evil. In the last paragraph of his able report on the Mutiny of 1857, Sir Herbert Edwardes writes:—"As a last word upon the crisis of 1857 I implore the immediate attention of Government to the imperative necessity of bridging the Indus at Attock. If it be not done, some day we shall bitterly repent it." Again, in an official letter, he says: "If I were

asked what public work should be first begun after the conclusion of the war, I should say a bridge at Attock. It seems almost incredible in the eight years of vigorous administration almost everything else should have been accomplished in the Punjaub except this indispensable link in its military communications." It does indeed seem incomprehensible that in the face of such weighty arguments the river should be still unbridged; but to us the *unready* all things are possible. The frontier road that joins Peshawur with Jacobabad is bridged, but unmetalled from its entry into Scinde near Kusmore to Kurrachee, so that communication with and down the frontier in rainy weather is difficult, not merely for troops, but often it has happened that the mails are delayed.

Now that British troops are cantoned in the principal cities of Eastern Afghanistan, and that a British general is virtually Ameer of that country, for the moment the necessity of rapid communication with the passes has become more and more necessary. The requirements of one campaign practically exhausted the supply of baggage animals in the Punjaub; and when the murder of Sir L. Cavagnari necessitated the reopening of hostilities, Kattiawar and Kutch, Madras, and even Persia, were indented upon for ponies and mules. Thanks to the strides made in the railway development of the Punjaub these animals were rapidly transported by rail to Jhelum, whence a tedious march of one hundred and seventy miles had to be undertaken before the mouth of the Khyber was reached.

In 1868 a Committee was assembled at Lahore to

consider the question of the Indus Valley Line. In its report I find the following words: "Each succeeding year shows more clearly that of all India the Punjaub is the province which it is the most necessary to render strong, and if possible impregnable. The martial and impulsive character of its own population and that of the population on its borders, and the events now occurring and constantly assuming increased importance, all alike lead to the conclusion that nothing could well add so immensely to our strength here as the knowledge that troops could upon occasion be conveyed in two days from the sea-board to Lahore, and thence in another day to the extreme frontier."

The late Lord Sandhurst, in an official minute dated 2nd November 1866, wrote: "I need hardly dilate on the additional strength it would give us on the Peshawur Frontier if we had a railway stretching from Lahore to our great garrison of Peshawur, and so connecting the latter with our system of military stations in the North-West Provinces. This additional strength would be felt in Cabul and in Central Asia beyond. *It is certainly required for our general system of defence.*" Lord Lawrence, Sir Bartle Frere, Sir Robert Montgomery, Sir Donald McLeod, Sir Henry Durand, Sir Richard Temple, and many other eminent men, concurred in these views.

These statesmenlike recommendations made by the ablest men in India were so far neglected that in September 1878, when Sir Neville Chamberlain's Mission was repulsed at the mouth of the Khyber, the railway

to Peshawur, the importance of which had been urged by successive commanders-in-chief, had only reached Jhelum, little over one-third of the required distance.

Ferozepore, not only the chief arsenal of the Punjaub, but of Upper India, is only connected with the line of rail by an ordinary country road; consequently all ordnance stores requisite for a campaign have to be conveyed to the nearest station, twenty-seven miles, on bullock carts. They are then transshipped, thus doubling the cost of freight and multiplying indefinitely the length of time employed in their conveyance. It was not until the Hazara expedition of 1868 that we deemed it necessary to place Ferozepore in telegraphic communication with the rest of India!

On the 23rd of November 1879, forty-three miles of railway towards the Bolan had been constructed, and it was carried as far as Sibi* during the month of January 1880, to be, it is hoped, rapidly extended without break of gauge to Candahar.

It is probable, from the energy and determination evinced by the Government of India, aided by the experienced officers of the Scinde, Punjaub, and Delhi railway, whose services are at the absolute disposal of Government, that with the exception of bridging the Indus at Attock, which must naturally prove a costly and lengthy undertaking, the branch lines so constantly advocated by me for more than twenty years,

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* Sibi is thirteen miles east by north from Dadur, up to the present time belonging to the Afghans.

will have reached the Khyber soon after the completion of the branch to the Bolan. But we must not rest content with this; lateral communication between the termini is equally imperative. Along the Trans-Indus frontier, as I have shown (*ante*, page 62), there are no good roads, and were it necessary to concentrate a large body of troops at the mouth of the Gomal or Sakhi Sarwar passes in the rainy season, such a feat would be found difficult. Between the river Chenab at Mooltan and the Indus at Dera Ghazi Khan (both unbridged) lie many streams which at all times are difficult for wheeled traffic, and in the hot season impassable. It is essential that the delta of these rivers should be traversed by a macadamised high road practicable for guns at all seasons of the year. With steam ferries across the two main streams the frontier garrison town of Dera Ghazi Khan would then be but one forced march of forty miles from the Sher Shah station of the Scinde, Punjaub, and Delhi Railway. Hitherto we have not only neglected the means of communication with our Trans-Indus Provinces, but, with the exception of the Peshawar valley in the extreme north, the entire defence of the border has been intrusted to native troops largely recruited from the very clans they are called upon to overawe. The whole available force of Northern India has been massed at the mouth of the Khyber, and the five hundred miles of border line which stretch from the Afreedee hills to the Gulf of Arabia have been guarded by one company of the Line in the fort of Akalgarh, and the native troops of the Scinde and

Punjaub frontier forces. If the term "haphazard," as applied to the frontier by the Premier, is a just one, how much more applicable is it to our treatment of it. Communications unopened; rivers unbridged; railway extension neglected; fortified posts either wanting or defective; the defence removed from the control of the Commander-in-Chief; our relations with the independent tribes conducted on parochial systems by each subordinate Deputy-Commissioner without reference to his neighbour on his right hand or on his left; trade stifled from the want of roads; whilst any attempts to penetrate into the mountain barrier to the west, have been persistently forbidden.

But the fiat has gone forth that the Trans-Indus Provinces shall in future be deemed a portion of the great empire of Hindostan. How far to the west this new province will extend it is impossible to say, but the announcement that railways have been sanctioned to Candahar and Jellalabad, even if premature, is some proof in favour of the assertion that the former city at any rate will be included within it.

CHAPTER VII.

THE PROBABLE ROUTE OF THE INVADER, AND HOW TO MEET HIM.—GENERAL ABRAMOFF.—SIR HENRY GREEN.—SIR WILLIAM MEREWETHER.—GENERAL HAMLEY.

Now, our old frontier was in many respects an excellent one. Had the passes leading to it from without been hermetically sealed by strongly fortified positions, and had the supineness of the Indian Government been so far overcome as to have permitted the construction of ready means of access to and along it from within, it would have lacked but two desiderata, one the practicability of making a counter-stroke against an advancing foe, and the other a flanking fire along its front. It therefore stands to reason that any forward movement must be undertaken with a view of supplying these deficiencies; and in order to discuss the subject with impartiality it is necessary clearly to understand from what quarter an invading army is likely to arrive. Certainly not from the sterile steppes of the Oxus, down the valley of the Kunar to Jellalabad, and so through the Khyber on Peshawur. Modern war is waged on a colossal scale, and the army which invades India must come prepared with the latest scientific requirements. It must come ready to meet

an intelligent and gallant foe, armed with everything science can suggest and money can procure. It will find rivers unbridged, which will necessitate the carriage of a pontoon train, for the banks are not clothed with vegetation of a size from which to construct boats; temporary bridges would be impossible, and we may rest assured that any craft which now fulfil the requirements of local traffic would be swept up by British generals. A siege-train must necessarily accompany any army which resolves on the conquest of Hindostan; and though General Abramoff may have conveyed field guns over the northern spurs of the Hindoo Koosh, we know enough of the Baroghil and Karambur passes to feel that even Russian enterprise would stand aghast at the difficulties attendant on the transport of one of their heavy siege guns over these ice-bound ranges. An invasion of India by this route has been advanced before now, in moments when the Russian scare was at its height. A mere glance at the map should be enough to prove that it is absolutely impracticable.

The road from Balkh through Bamian on Cabul is slightly less difficult. It is true that a battery of Bengal Artillery reached the latter place in 1839, but that an army of sufficient dimensions to undertake the invasion of India should essay its passage is not only improbable but impossible.

Indeed, all the best authorities agree that if any invasion is to be attempted it will follow the route from the Caspian to Herat and on by Candahar to the Bolan. The road presents no grave difficulties until Quetta is reached. Between that place and the Indus great natural ob-

stacles exist which we ourselves have more than once overcome. Our object, therefore, must be to occupy such a position that we may be enabled to make an effective counter-stroke on any army advancing down this road; and with the exception of holding the northern portion of our frontier in sufficient strength to prevent irruptions of the independent tribes, no care need be taken to construct any formidable positions north of the Bolan. Any move into the Pathan hills will inevitably result in the permanent hostility of those clans which for centuries have remained unconquered. That we could eventually subdue them no one can deny; but the question naturally arises—*cui-bono?* They are averse to commerce. They laugh at the civilising influences of trade. Their country is but a network of rugged mountains, which are incapable of development; and to push forward posts into these hills, as we necessarily must do if we permanently occupy Cabul or Jellalabad, is to raise a hornet's nest about our ears, which will not be quelled until thousands of lives have been lost and lakhs of treasure expended. Even now their forbearance is purchased by the shimmer of the potent rupee. When once their subsidies are withdrawn the safety of the Khyber will only be maintained by the employment of ten thousand men. It is urged that the permanent occupation of Cabul and Candahar would bring under our sway the whole of the tribes peopling the mountains lying between the Khyber and Bolan passes; aye, but they number a quarter of a million fighting men, and their subjugation would be a work of generations. Leave Northern Afghanistan to be ruled

by its own Sirdars, and let us turn our attention to the permanent occupation of the fertile tracts in the south, which, besides affording us military security, offer inducements for the employment of English capital in the material development of their unlimited resources. General Hamley says: "At Candahar we should hold such a position towards Persia as would seriously affect her relations with Russia; and finally, our presence there would be almost decisive against any design of the enemy to invade India through the passes." Sir Henry Green, no mean authority on frontier matters, fully concurred in the view that to push posts forward into the Pathan hills north of the Bolan would be a huge political error, and only tend to aggravate matters. He said: "With a British force stationed at Candahar, the Afghans friendly, and an Afghan garrison holding Herat assisted by a few selected British officers, we might contemplate without fear any movements of Russia in Central Asia having for their object an attack upon our Indian Empire." Sir William Merewether, who, as Commissioner of Scinde and a Member of the Indian Council, speaks with the weight of experience as well as of authority, said, on the occasion of the Lecture given by General Hamley, "Candahar is *the* strategic point. It not only forms the best position from which to advance to Herat when necessary, and to afford support to the occupiers thereof, but no hostile force would dare to venture on attempting an approach to India by Cabul and the Khyber while we hold Candahar in strength."

Irrespective of its strategic value, political considerations point to the advisability of occupying Candahar as

our advanced work. The tribes of the southern provinces of Afghanistan are far less hostile towards us than those of the northern, whilst those who line the route from Jacobabad have shown no attempts during the recent campaign to interfere with our line of communications. As General Hamley remarked in his lecture, "our trains march as safely now from the Indus to the Khojah as from London to Aldershot."

There is little doubt, whatever course we may pursue with regard to Cabul, that our occupation of Candahar must be permanent. I should like to see our annexations minimised to the greatest possible extent, and with this end in view, I would beg to quote *in extenso* that portion of General Hamley's lecture which bears on the point.

General Hamley says :—

"In saying what I think should not be done, I am prepared to say what I think should be done on this side; and it is satisfactory to me to think that the alternative plan, while, in my opinion, the best in the military sense, involves no extension of territory, no expenditure worth mention, and no increase of frontier force. It consists, first, in blocking the mouths of the Khyber on our side of it with an intrenched camp, armed with powerful artillery, to be garrisoned by the Peshawur troops, reinforced in case of need. If this were suitably occupied, I cannot conceive how an enemy's force, however superior, advancing, as it must of necessity, in lengthened, even straggling, array to the mouth of the Khyber, could ever expect to issue from it. In like manner, an intrenched camp, armed with heavy artillery, might be placed at the issue of the Gomal Pass, and occupied by the garrison of Dera Ismael Khan, and another, though rather to strengthen the feeling of security than from necessity, in front of the Kuram. To complete the system of defence, these posts should have in their rear protected passages over the Indus connected with the railway by branch lines.

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"To leave no alternative untouched, I will suppose that we have pushed through all these passes, made the mountain territory ours, and placed our posts on the road from Cabul to Candahar. Let us consider for a moment how our extensive frontier is generally guarded. The line of communication between the posts should pass, not through, but behind, their front. Any of them, when driven back, should have secure lines by which to find support from others, and all, when retiring, should possess, in numerous roads, the means of concentrating upon important points. But what of this do we see in our supposed new frontier? There we have bodies widely apart, isolated by the first advance of the enemy, each with its own narrow pass to retire into, entering which, it continues to be isolated from the others for weeks till it emerges still at a greater distance from them in our present territory. I trust we shall not incur the charge of such a vast extent of barren territory, with its savage populations, for such a result as this, and that our notion of a rectified frontier will not include any of these isolated lines and posts thus unmeaningly thrust forward into the mountains. Any good that could possibly be hoped for from them would be much more effectually accomplished by the force at Candahar.

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"Looking at the northern half of this part of our territory, I think we should be thankful for possessing a frontier so easily rendered impregnable. Looking at the southern half, we have no less reason to be thankful for having acquired in Quettah such means of vigorous and effective action, and such an opportunity of securing new advantages of the most important and decisive kind. With a garrison strongly posted in its lines at Candahar, with all the routes and stages by which our force might be assembled on that point, all sources of supply and all arrangements for transport laid down, as our trained staff officers are certainly capable of laying them down, we might view calmly any possible complications before us, whether arising from the augmented military power of Russia in the East, from the success of her intrigues, or from her open hostility."*

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* "Their line (the S. P. and D. railway) could not but be regarded as valuable as a military line, although not exclusively so; at the same time its value as a military line was very great, and he was glad to have the opportunity of stating on this occasion the feeling of eminent military men on this point of

This is a masterly exposition of the, to my mind, only sensible way of rendering our frontier practically secure. Our duty on this point is clear. Complete our communications to the frontier; convert Peshawur at once into a formidable military station (Sir Edwin Johnson tells us that the Indian authorities have been thirty years deciding as to the style of works they shall construct; a committee of Royal Engineers, if called upon, would in a few weeks

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view. The occasion was a meeting of military men to hear a lecture by General Hamley on the subject of the north-west frontier of India. The audience comprised men the most capable of any of judging of the subject, and he was much gratified at hearing the whole arguments that were brought forward during the discussion that followed the lecture. The argument, in which remarkable unanimity prevailed, was mainly this—with regard to the Khyber Pass all they had to do was to close the mouth of it, which they could do, and dispose of any force attempting to come forward; but with the Bolan Pass it was different. This side of it there was territory sufficient for the expansion of an invading force, and it was admitted that invasion by the Bolan Pass was a practicable thing, that an enemy could pass through and form itself, and could engage in effective action with any army we could send against it. At the same time the conclusion was arrived at that our general would be a most fortunate man, inasmuch as this railway in which they were interested was in such close contiguity that he could readily obtain such supplies and reserves as he required. The lecturer pointed out in what respect this difficulty in that portion of the frontier could best be remedied, and said that was by means of a railway from Sukkur to the mouth of the Bolan Pass. As a precautionary measure we have occupied Quetta, and that was the remedy which was considered essential. While listening to the lecture and hearing the arguments upon it, it occurred to him that he was hearing that which had been urged in that room for many years past, and advocated by their chairman more than twenty years ago in the book he then published, entitled "The Indus and its Provinces," a copy of which was sent to him in his then official capacity, before be had the pleasure of Mr. Andrew's acquaintance; and in that book he found all the conclusions arrived at were in remarkable concurrence with those which were come to by the military men who discussed the lecture to which he had referred. He (Mr. Thornton) regarded this as so remarkable an instance of the fore-sight and prescience of their chairman that he thought it a circumstance which was worthy of being mentioned on the present occasion."—*Extract from the speech of Mr. E. Thornton, C.B., at a meeting of the S. P. and D. Railway in December* 1878.

draw up a scheme which ought in all conscience to satisfy even such an undecided body of gentlemen as the Supreme Council); push forward the Kohat garrison into the fertile Kuram valley, and locate a strong European brigade on the lofty plateaux under the Peiwar Kotal; Dera Ismael Khan in like manner might be advanced as far as Tank, and its garrison increased by English regiments; and Candahar made the Kars of our North-west Frontier. Permanent bridges at Attock and Sukkur would of necessity be covered by fortified bridge-heads. The frontier road from Peshawur to Jacobabad should be metalled, and the strategic railways to the Khyber and Candahar completed with all possible despatch.

Last, but not least, a larger proportion of troops should be permanently massed on the frontier, many of the down-country stations in Madras, even in the Cis-Sutlej provinces, might with safety be denuded of their garrisons; and every regiment serving on the Trans-Indus border should maintain an effective regimental carriage establishment, similar to that which has been worked with such success in the Frontier Force regiments for the last thirty years. The one blot in the success of the recent campaign in Afghanistan has been the transport arrangements; and until a well-organized system is established under which regiments shall take as much pride in the efficiency of their baggage-animals as of their bands, all efforts in this direction must fail. With a small staff thoroughly efficient in time of peace, a nucleus would exist around which, in time of war, a more extended transport

train would be formed. We should then have officers and men conversant with the habits of mules and camels; and the immense loss the Treasury has sustained by the death of sixty thousand of these animals in one campaign would be partially if not entirely avoided.

Finally, Sir Justin Sheil said, many years ago, that established in force at Candahar with a railway along the valley of the Indus, we could await any attempt of Russia with calmness. This opinion I published twenty years since, and to it I adhere. To retire from Cabul and the Khyber is impossible for the moment, but I trust we may soon be enabled to do so with honour, and rest satisfied with sealing up the Khyber. Being in strength at Candahar, we should bar the advance of any force to the Bolan; while an enemy advancing to the Khyber would be liable to be taken in flank and rear.

I have endeavoured in the foregoing pages to give a brief and accurate description of Afghanistan and the border land of our North-west Frontier, showing how, with the smallest extension of territory, a virtually impregnable position may be taken, which shall dispel at once and for ever the idea of Russian invasion. As a man of peace, one keenly alive to the necessity of civilising, but not by the sword, I have dwelt at length on the mutual advantage to be derived from the improvement of our communications with Afghanistan. The development of trade with that country will do more to consolidate our rule than the erection of a dozen fortified posts. Commerce

is the great civiliser of nations, and when once the people of Afghanistan learn the truths their merchant-soldiers have long since felt, half our task will be done. Thirty years ago all England was discussing the possibility of pacifying the Punjaub ; now we have no firmer allies than the Sikhs, who have derived—and they are the first to acknowledge it—incalculable benefit from our rule. Three decades is a long period to look forward to ; but few reasonable men can doubt that ere the close of this century the Afghans of Candahar will have learnt the benefits of British rule, and will have become as loyal subjects of the Queen as even the Sikhs and Rajpoots now are.

CHAPTER VIII.

THE POWINDAHS, OR SOLDIER-MERCHANTS OF AFGHANISTAN.

No account of Afghanistan would be complete without a reference to the Powindahs or great soldier-traders of the country. Most writers on this subject have fallen into the very pardonable error of describing the Powindahs as a tribe ; in point of fact, nearly every great clan in Afghanistan furnishes one or more sections to this nomad mercantile community. The majority, however, are either Ghilzais the illegitimate, or Lohanis the legitimate, descendants of the great Khorassani chief Lodi. Their villages, such as they possess, are dotted over the western slopes of the Suliman range, in the valleys of the Turnak or the Gomul or even in the Derajat. During the summer months they betake themselves to the highlands of Afghanistan, where the old men and women folk attend to the flocks and herds, whilst the able-bodied men push on to the westward with Indo-European goods. As autumn approaches, the traders return to their homes, and then the whole clan

migrates to the valley of the Indus. Leaving their families to graze the spare cattle in the neighbourhood of Dera Ismail Khan, a portion of the tribe goes on with goods, horses, &c., to Delhi, Cawnpore, Calcutta, and even to Madras and Bombay. They arrange so as to reach their encampments about the month of March, when again picking up their families and worldly goods they move up the Gomal Pass to Cabul, Ghuzni, Bokhara, Herat, and Balkh, returning in time for the autumnal visit to the British possessions in India. To anyone commonly familiar with the internal divisions of Afghanistan, a glance at the map of Central Asia will suffice to convey a just notion of the enterprise these merchants have voluntarily undertaken and successfully accomplished. They sell to the luxurious Mahomedan at Delhi the dried fruits of Bokhara; to the native troops on the Punjaub frontier they bring the sheep-skin coats or camel's-hair chogas of Cabul; for the British officer, knick-knacks in the shape of Russian china; and they buy at Calcutta English calico and muslin for the harems of Herat, and quinine-tea and fire-arms for the savage tribes of Turkestan. Midway in their path lie the rugged mountains of Suliman, whose snows and torrents are friendly in comparison with the fierce Mahsood Vaziris, who carry on against the soldier-merchants war to the knife. Year after year, and generation after generation, has this ceaseless strife endured.

To meet the opposition that inevitably awaits them at this part of their journey, the Powindahs are compelled to move in large bodies of from four thousand to five

thousand. Regular marches and encampments are observed under an elected Khan or leader. A day in the Vaziri hills seldom passes without a skirmish. Occasionally there is a pitched battle of the most bloody character, when any particular event has occurred to exasperate either side. These soldier-merchants have more than once attempted to arrange a compromise with their enemies, and thus obtain an unmolested passage on payment of a fixed "black mail," but the Vaziri jirgah, or Council of Greybeards, has invariably refused the offer of peace.

The consequence is that the Powindahs are as much soldiers as merchants. They are always heavily armed with antique weapons, making up in quantity for any deficiency in their quality. When in British territory they pay us the compliment of going about unarmed, and display a carelessness concerning the proper escort of their grazing herds when close to the frontier which offers a tempting bait to marauding parties and affords plenty of occupation during the winter months for our frontier out-posts. In appearance, with their storm-stained Afghan clothing, reckless manners, and boisterous voices, they are the rudest of the rude, and though the few individuals who are deemed sufficient to conduct the caravans through India show a cunning quite commercial in their mild and quiet conduct, never taking the law into their own hands and always appealing to the justice of the magistrates, yet when united in large bodies, as they are throughout the winter and spring, in their marches through the Vaziri hills they show the energy of gallant soldiers, and generally succeed in

beating off any force that may be opposed to them. In olden days, prior to the British annexation of the Punjaub, they used to pay heavy customs dues to the Sikh authorities on the Indus, merely because there was no help for it. Had they refused, their caravans would have been seized in the Punjaub ; but beyond this perfectly justifiable proceeding the Sikhs never ventured to interfere with them, though they committed all sorts of depredations on the lands under the lower fringe of hills.

It is an interesting sight to watch a Powindah caravan wending its way through the Gomal Pass. Long trains of gaudily equipped camels, their head-stalls ornamented with bands of worsted work and strings of coloured shells. On their backs are slung the covered khajawahs containing the wives of the richer merchants. These form the main body of the procession, which is made up of other camels laden with bales of merchandise, droves of sheep, goats, troops of ragged urchins screaming and laughing, in their endeavours to aid the women in maintaining some sort of order in the apparently chaotic mass. A few men armed with knife, sword, and matchlock, guard the main portion, but a few hundred yards ahead may be seen a compact body of the fighting men of the clan, mounted and dismounted, all armed to the teeth, who constitute the vanguard. On either flank, crowning the heights with the greatest care and almost military exactitude, move a similar body of footmen, whilst in rear follows an equally strong party, all on the watch for their hereditary enemies the Vaziris. As the caravan nears the halting stage, pickets are

posted, the camels are unladen and permitted to crop the herbage of the hills in the immediate neighbourhood of the caravan, but even here they are strongly escorted and driven to the encampment as dusk draws on. The black blanket tents are pitched, fires lighted, and the evening meal cooked in readiness for the return of the camel escort. The food depends on the wealth and position of the family. Amongst the poorer, flour and water is kneaded around a smooth circular stove, and the cake left to bake in the embers of a wooden fire, a very palatable loaf is then made, and this forms the staple diet of the Powindah. The richer men indulge in mutton, fowls, and dried fruits, and all are great connoisseurs in snuff and tobacco.

As a rule the Powindah clans have been on friendly terms with the British, and they show themselves keenly alive to the advantages of civilisation; they avail themselves largely of the rail from Chichawatni and Mooltan, marching to those places from the mouth of the Gomul Pass. So satisfied are they of the safety of the Derajat that hundreds of the poorer Powindahs leave their camels in charge of women and children, take work of all sorts under the Executive Engineer of the frontier districts, and so earn money which under other circumstances they would never see. The women of the Powindahs are unveiled, and betray a lively interest in European manners and customs; they are independent in their manner, graceful in their bearing, and many are strikingly beautiful; they are said to be chaste, and the lawless nature of their lords warrants this supposition. The children are merry little things, fair and

chubby, eager to oblige, but most independent. If an Englishman rides up to a Powindah "kirri" or encampment, the children clamour round, anxious to hold his horse, to show their kittens, to run races, or to earn a "pice" in any honest fashion. No sooner has one boy got the horse in his possession than there is a general struggle for the honour of riding him up and down the kirri, and it is not until one of the greybeards has threatened the urchins with condign punishment that they cease their uproar.

On two occasions only, as far as I can learn, have the Powindahs ever shown hostility towards us. The first was in 1849, when the Nasirs refused to pay their grazing tax to Sir Herbert Edwardes, and he, attacking them, seized three hundred camels in default. The second was last winter, when the Suliman Khels, exasperated at the wholesale seizure of their camels for transport purposes, joined with their natural enemies, the Mahsood Vaziris, and made an attack on the frontier out-post of Tank. They were defeated with very heavy loss. They have, on the other hand, often aided us materially in work on the border, and many of the outposts are almost entirely their handiwork.

The articles brought by the Powindah merchants into India are,—

From Bokhara and Samarkand.—Silk, horses, drugs, manna, wool, gold coins, furs, and gold and silver wire and thread.

From Herat.—Persian carpets, currants, turquoises, goats' hair, saffron and other dyes, catgut, antimony, quince seed, and Herat silks.

From Cabul.—Pistachio nuts, dried grapes, almonds, pomegranates, melons, grapes, pears, apples, asafœtida, dried apricots, cinnamon seeds, safflower, goats' hair for shawls, country clothes, sheep-skins, choqas, or camels'-hair cloaks, and dyes.

From Ghuzni and Candahar.—Madder, Sheeps' wool, liquorice, rice, ghee, sarsaparilla, gum arabic, mint, rhubarb, and fruits.

The total imports are about a million sterling. The goods the Powindahs export from India are,—English cotton piece-goods, silks of all colours, chintzes, European coloured clothes, merinos, velvets, copper, tin, tea, cardamums, pepper, betel nuts, sugar, country muslins, indigo, dried ginger, borax, sal ammonia, turmuric, carbonate of potash, salt, pewter, steel, fire-arms, gunpowder, honey, cotton, and various medicines.

The value of the merchandise annually imported by the various sections is—

1.	Nasan	£100,000
2.	Niazis	25,000
3.	Karotis	200,000
4.	Daotonis . . .	100,000
5.	Miankhel	200,000

And there is no doubt when the mountaineers holding these passes have tendered their submission to us, and steps have been taken to secure the safety of the roads, the traffic will largely increase. Year by year the passes have become more difficult to traverse, year by year their wild custodians have grown more daring, a they have become better armed, and as the English

Government have betrayed an indifference towards the development of trade with Central Asia, so have the Russian Government proportionately increased their endeavours, and with material success, to stock the markets of Turkestan. Instead of trade between India and Central Asia having augmented of late years, it has actually diminished, and the Powindahs themselves ascribe these losses to the heavy grazing tax levied by the British frontier officials, to the enhanced ferry charges on the rivers of the Punjaub, to the plunder of their camels from our territory, and to their being debarred the right of retaliation, and to the insecurity of the route. Proposals were made by the Commissioner of the Derajat to organise some scheme by which the Ameer of Cabul and the British authorities should forcibly undertake the defence of the Gomal Pass, which is the highway of commerce, but the Government of India were not disposed to adopt a policy of interference, and the plan fell through. There is not the shadow of a doubt that when the line of rail is completed to Dadur and to the Khyber, the Gomal Pass will be entirely deserted, and its annual trade, now estimated at nearly a million sterling, will be largely increased and will pour through the Bolan and the Khyber, just as it is intended for the markets of Bombay or of Northern India.

The Niazis, one of the most powerful of the Powindah clans, has an offshoot settled in British territory at Isa-Kheyl, on the Indus. They claim to be descended from Niaz Khan, the second son of Lodi, King of Ghor, by his second wife Takia. Lodi was the Lohani chief who, in A.H. 955, invaded Hindostan, and, conquering

the Daman or cultivated lands fringing the Suliman mountains, apportioned it amongst his sons: the fertile district of Isa-Kheyl fell to his second son, whose descendants have since then held uninterrupted possession of it. The agricultural section of this clan are good, quiet people, excellent cultivators, and faithful, loyal subjects of the British Government. Although it is upwards of seven hundred years since the tribe settled here, some of the sections still retain their nomadic habits, but in all other respects they conform to the customs of their more settled brethren. They never permit a Niazi girl to marry out of their tribe, and have never fallen in with the usual Pathan custom of the bridegroom giving a sum of money to the bride's father. Successful as traders, the Niazis are no less successful as agriculturalists, and since the British occupation of the Trans-Indus provinces their country has thriven. Prior to that, during the Sikh rule, they were constantly in trouble, but now nowhere along the Punjaub border are trustier allies to be found than the Niazis of Isa-Khel. On the outbreak of the Punjaub war in 1849, their chief raised a troop of horse and accompanied Sir Herbert Edwardes to Multan, one of his brothers being killed whilst gallantly charging the Sikh guns at the battle of Kineyri on the 18th June 1848. In the Mutiny of 1857 the old chief once more raised a body of horse and did good service against the rebels. Many members of his family served in various capacities against the mutineers in those critical times, and never has a frontier expedition been organised on the Banuoo border but the Niazi chiefs have ridden in

and placed themselves and their followers at the disposal of the British Government, thus testifying by lasting gratitude their loyalty and devotion to the state that emancipated them from the thraldom of the Sikh.

The Nasars, though one of the most powerful and wealthy of all the Powindah clans, are disowned by both Ghilzais and Lohanis. Of their origin nothing is known, although they have been for centuries one of the chief trading clans between Hindostan and Khorasan. This alone would lead to the belief that they have a common ancestry with the remainder of the Powindah tribes. It is popularly supposed, however, that they migrated to Khorasan early in the fourteenth century, in company with some Mian-Khel Powindahs, and that they for many years, under the protection of this tribe, pursued the avocation of ironworkers, until increasing in number and in wealth they commenced trading on their own account.

CHAPTER IX.

BELOOCHISTAN.—PERSIA.—TURKESTAN.—RUSSIA, HOW TO CHECK HER ADVANCE.—OPINION OF FIELD-MARSHAL-LIEUTENANT VON KUHNENFELD.

Beloochistan.—This country, spreading from the Arabian Sea to the borders of Afghanistan, forms the western boundary of Scinde. It is a land of hills and deserts, with here and there a cultivated valley, inhabited by a number of pastoral tribes who obey no government but that of their several chiefs. Of these the most considerable is the Khán of Khelát, who wields among his neighbours a kind of lordship as unstable as that which the earlier kings of France wielded over the Dukes of Burgundy and other powerful vassals of their day. It is difficult to say what the Beloochees are by race, for they vary greatly among themselves in ethnical traits. Semitic or Aryan, however, they all speak some Aryan tongue, and profess some form of Mahomedanism. The country is said to be rich in minerals, especially copper, and sulphur. Such trade as it boasts is carried on by caravans, or káfilas, which make their way across the Hála Range into Scinde through the long winding gorges of the Bolan Pass,

liable occasionally to attacks from the robber tribes who infest the border. The chief carriers of the trade are the Lohanee merchants, a pastoral race of Afghans, who occupy the country eastward from Ghuzni to the Indus.

It was along the sandy wastes of southern Beloochistan that part of Alexander's army plodded their weary way back to Babylon from the plains of Scinde, while Nearchus and the fleet proceeded by the Arabian Sea and Persian Gulf. Great, too, were the hardships which Sir John Keane's soldiers had to endure in their successful march through the Bolán Pass to Candahar and Ghuzní, in 1839. In 1843 bravely did the Belooch troops of the Ameers of Scinde fight against Sir C. Napier at Meanee and Hydrabad.*

Persia.—On the west of these two border countries, stretches the kingdom of Persia, or Iran, still largely peopled by the same old Aryan race which once sent forth a Darius and a Xerxes on bootless errands against the Greeks of Marathon and Salamis, and afterwards fought in vain under another Darius against Alexander's sturdy Macedonians. Between that monarch's fall and the victories achieved by Othman's Arabs, successive dynasties, Greek or Persian ruled the land of Cyrus the Great, and carried on a frequent struggle with the Byzantine Emperors.

The Parsees, descendants of the old Persian fire-worshippers, left their native land in the early days of Mahomedan conquest to find shelter from persecution, first in Gujerat, and afterwards in Bombay. Though

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* "India and her Neighbours."

few in number, they are at once among the wealthiest, most enlightened, and most energetic citizens of the western capital.

The official designation of the sovereign is Shah-in-Shah, or King of Kings. He holds in his hand the lives and property of his subjects, but, unlike the Sultan of Turkey, has no spiritual supremacy.*

One of the greatest kings of modern Persia was Shah Abbas, a contemporary of Akbar and our own Elizabeth. In the early years of this century the first Napoleon sent a mission to Tehran, which was received with extraordinary distinction, in order to further his designs on India, and for several years French influence was all powerful at the Court of the Shah.

Before anything was accomplished to the detriment of England, her great and implacable enemy was removed from the arena in which he had enacted so great a part, and Persia fell again into the coils of a more sinister and abiding influence.

Russia from the time of Peter the Great sought under one specious pretext or another to despoil Persia of whole provinces, having recourse to violence when other means failed. This state of things continued until about the middle of the eighteenth century, when the ferocious but mighty conqueror, Nadir Shah, compelled the Muscovite and the Turk to restore the territory they had wrested from the ancient dominions of the Shah.

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* The Sultan is the Caliph or spiritual head of the Soonees, who adhere to the successors of Mahomet Aboobukhr, Omar, and Osman, while the Sheahs are the followers of Ali, the son-in-law of Mahomet and his sons, Hoossein and Hassan, whose memories they revere, and annually lament their death by public mourning.

On the death of Nadir Russian designs were renewed. Russia interfered to settle the claims of rival princes of Georgia, which owned allegiance to the Persian crown, and *settled* the matter by absorbing the province in the mighty sponge of Russian ambition.

War was declared, Persia was defeated, and more territory was annexed by her powerful and relentless foe, until at last, fearful that the Colossus of the North would seize in his iron hand the entire kingdom of Persia, the British interfered diplomatically and obtained a respite for the enfeebled and hard-pressed king, who agreed to give up more territory, and to have no armed vessels on the Caspian.

Regarding the insidious movements of Russia towards the East, Sir Justin Sheil, late British Envoy at the Court of Tehran, made some years ago the following pregnant and suggestive remarks:—

"The Caspian Sea washes the coasts of the Persian provinces of Talish, Geelan, Mazenderan, Asterabad, and Persian Toorkomania. The inhabitants of these spacious territories carry on an extensive commerce, in part with the Persian ports on that sea, in part with the Russian districts on its northern and western shores. With a far-seeing policy, which anticipates all the possibilities of futurity, when Persia was gasping almost in the last throes, Russia humbled her to the dust, by forcing on her the renewal of a stipulation contracted at the treaty of Goolistan, by which she bound herself not to maintain any vessel of war in the Caspian Sea. Upwards of a hundred years ago, an Englishman named Elton, a man of wonderful ability and resource, who had been brought

up to a seafaring life, and who had previously been an officer in the Russian navy, was in the service of the Shah (Nadir), and not only commanded his naval forces in the Caspian Sea, but built ships for him on European models. The most unnautical nation in the world, with an Englishman as their leader, became dominant on the Caspian; and, as the author of the 'Progress of Russia in the East' says, '*forced the Russians to lower their flag*,' and the banner with the open hand* floated triumphantly through the length and breadth of the Caspian. To preclude a revival of this discomfiture, Persia was forced to sign her degradation, and the Caspian became a Russian lake."

"Not a boat is allowed to move without a passport, under heavy penalties, and even Persian boats are under the same restriction; this, too, on the coast of their own sea!"

In the early part of this century the British envoy concluded a treaty with the Shah of Persia, which brought Persia and India for the first time into close political relations, with the view of thwarting the ambitious designs of Buonaparte against our Eastern possessions. Some years afterwards an embassy from England reached Ispahan, and since then English influence has been always brought to bear on Persian politics. In 1839 Lord Auckland's forward movements in the Persian Gulf and Afghánistán compelled the Shah

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* "The banner of Persia is surmounted by an open hand, of which the five fingers are said to express Mahommed, Ali, Fatma, Hassan, and Hoosein."

to recall his troops from the siege of Herát, so gallantly defended by the young Englishman, Eldred Pottinger. Another attempt in the same direction in 1856 had to be checked by force of arms, and Sir James Outram's brief but successful campaign along the Persian Gulf, ended in a peace which has never since been broken. Rumour gave Russia the credit of suggesting these moves, but this was promptly disavowed.

The revenue of Persia is less than £2,000,000, and as there is generally a surplus, it is paid to the private treasury of the Shah, who is supposed to be enormously rich, while his people are miserably poor and diminishing in number from misgovernment. The area of the country is above 600,000 square miles, with a population of 4,000,000, or about seven to the square mile.

The present Shah, Nasr-ud-din, visited Europe in 1874, taking England on his way from Berlin to Paris. To judge from his diary, which was afterwards published, he was particularly struck with the populousness, the general well-doing, the busy traffic, and the vast resources of this fortunate country. Tehran, his present capital, is in telegraphic communication with Bombay, London and St. Petersburg, and he is said to be anxious to introduce railways and other modern improvements into his dominions.

It is to be hoped the Shah may be allowed to cultivate the arts of peace, and that he may not have to play the part of Roumania or Servia in Central Asian politics.

Turkistán.—Along the northern frontier of Persia, Afghánistán, and Cashmere, stretches a vast expanse of rolling table-land, crossed here and there by rugged hills,

and watered mainly by two rivers, the Sír and the Amú, better known to classical scholars as the Jaxartes and the Oxus. Túrkistán, or as it was once called, Tartary, extends from the Caspian to the borders of China, and is peopled for the most part by roving tribes of Turcomans, Uzbeks, Kurghiz, and other branches of the great Mongol race. Of this vast region the only settled parts are the three "Khanates," or kingdoms of Khiva, Khokán, and Bokhára, with the country lately ruled by Yakúb Beg, the strong-handed Ameer of Káshgar. The terrible Tartar, Chingiz Khán, carried his iron sway over the greater part of Central Asia, and his famous grandson Tamerlane (Timur the lame), ruled over a wide dominion from his splendid capital of Samarcand in Bokhára. From the neighbouring province of Khokán, or Firghána, Timur's illustrious descendant, Báber, made his way, after many strange turns of fortune, across the Indus to found the Mogul Empire of Hindustan. Khiva, the ancient Khárizm, was also in its time a powerful kingdom; but its greatness had long decayed, before the marauding habits of its people provoked the Russians, in 1874, to invade their country, and reduce their Khán to the state of a tributary prince.

One after another, each of these three khánates has felt the weight of Russia's victorious arms, and paid with loss of territory for its raids on Russian ground, or its vain resistance to Russian ambition. The work of conquest, begun about twenty-five years ago, has already stripped them of half their former territories, and the Kháns who still nominally rule the remainder, have sunk into the position of weak and obedient vassals to the

"White Czar." Kashgar, on the other hand, under the strong sway of the late Yákub Beg, the successful soldier from Audiján in Khokán, has in the last twenty years risen from an outlying province of Western China, into a powerful Mahomedan State, connected by commercial treaties alike with Russia and British India. The encouraging reports of English travellers to Yarkand, one of the Amir's chief cities, were followed up in 1874 by the despatch of an English mission under Sir Douglas Forsyth, who brought back with him a treaty securing favourable terms of trade between the two countries. It would appear, however, that no profitable trade can ever be established with a country divided from India and Cashmere by dreary and difficult mountain passes of tremendous height, open only for a few months in the year, and even then unfit for the passage of anything but lightly laden mules and ponies. The Chinese, moreover, who have so lately crushed the Mahomedan revolt in Yunnan, seem little disposed to let Kashgar slip for ever from their grasp; while the close neighbourhood of Russia, with her known dislike of all commercial rivals, bodes ill for the hopes which Sir D. Forsyth's mission raised in the hearts of English cotton spinners, and Indian dealers in tea, kinkobs (or gold brocades), piece-goods, and shawls, even were it possible to overcome the physical difficulties.

But Yakoob Beg is dead, and a striking actor is removed from the scene of Central Asian politics, leaving his kingdom to be absorbed once more in the overgrown empire of China, which has been for years slowly advancing to resume its old dominion. Or, if the Celestials are too tardy, Russia is ready with her

protection, like as in the other Khanates, even although the people may be Mahomedan fanatics; and their late prince received titles of honour from holy Bhokara and the Sooltan of Room. No man in Central Asia can wield the sword of Yakoob Beg.

"If Kashgar were permitted to fall into the Czar's possession, we should lose our *prestige* with the Mahomedans in Central Asia; whilst the occupation of Kashgar would prove a disagreeable thorn in our side, and give rise to endless intrigues."

"We have learnt how much trust can be placed in a Russian statesman's promises."*

How methodically and steadily, if slowly, the task enjoined upon his successors by Peter the Great has been pursued, let history attest.

The old southern boundary of Russia in Central Asia extended from the Ural, north of the Caspian, by Orenburg and Orsk, to the old Mongolian city of Semipolatinsk, and was guarded by a cordon of Cossack outposts. In 1716 Peter the Great sent a force, commanded by Prince Bekovich, to take possession of part of the eastern shore of the Caspian. Three forts were then built, though subsequently abandoned, after an unsuccessful expedition against the Khivans. More recently, since 1834, Russia has succeeded in firmly establishing herself on the eastern shore of the Caspian, where she has now four permanent posts, Fort Alexandrovsk, Krasnovodsk, at the mouth of the Balkan Gulf; Chikishlar, at the mouth of the Atreck; and the island of Ashurada. To

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* "A Ride to Khiva," by Captain Fred Burnaby.

the east she has crossed the Kirghis Steppe and established herself on the Sir Daria, or Jaxartes, which Admiral Boutakoff is said to have navigated for 1,000 miles in 1863. Thus the Russian frontier in Central Asia has been pushed forward until her advanced posts on the east look down from the Tian Shan range upon the plains of Chinese Turkestan. In Western Turkestan, also, she has gradually extended her boundary, and has annexed or subjected Tashkend, Kokand, Khojend, Samarcand, Bokhara and Khiva. In thus pursuing her career of annexation, Russia but follows the natural policy of a great military empire, being forced, moreover, as Sir John Malcolm said, by an impelling power which civilisation cannot resist when in contact with barbarism. She may indeed stop short of absolute and entire annexation, but there can be no doubt that by bringing Khiva under the same yoke as Bokhara, has established her influence on the Oxus, as she has already established it on the Jaxartes. The Oxus, or Amu Daria, is a noble river, not easy of navigation, but, it is believed, capable of being made so. It will furnish a ready means of carrying the tide of Russian annexation eastward until it finds a barrier in the Hindoo Koosh. When Russia shall have established herself along the Oxus, her position will be at once menacing to Persia and India. From Chardjuy on the Oxus there is a road to Merv, distant about 150 miles, and from Merv a direct road runs along the valley of the Murghab to Herat, the "key of India." Merv is historically a part of the Persian Empire, but in these countries it is notoriously difficult to define boundaries

with any precision. Should Russia succeed in occupying Merv, as there is too much reason to fear she ultimately will, and in converting the neighbouring tribes into friends or allies, her position would be one which we could not regard without the gravest apprehension.

Her serious reverse in August 1879 at Denzil Tepe, points to early absorption of the tract lying between the Caspian and the Oxus into the Russian empire, thus presenting an unbroken frontier from the Chinese Provinces in the East to the valley of the Araxes and the district of Erzeroum in the West.*

Surely, in the face of such facts as these, the time has arrived when England should rouse herself from the

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* The "Daily News" correspondent with the Merv expeditionary force sends, under date of the 20th October, a detailed and interesting account of the Russian disaster at Denzil Tepe on the 9th September. The failure seems to have been complete and disastrous, and due to the rashness and bad arrangements of the Russian commander. It would appear, however, that the loss of the Russians was a little under five hundred, instead of eight hundred, as at first stated. Be that as it may, it is clear that the Toorkmans fought with great courage, occupied skilfully constructed lines, and possessed arms which fired with precision at seven hundred yards distance. The difficulties and sufferings which the Russians had undergone on the march are sufficiently illustrated by the fact that the three battalions of the advance guard could muster among them no more than seven hundred and fifty officers and men. There can be no doubt, therefore, that the Russians have undertaken a task of a most formidable nature, for in the spring they will certainly renew their efforts . . . . . Preparations, indeed, for the coming campaign are already being made on a most extensive scale. This time two columns will be employed, one starting from the Caspian and the other from the Oxus. The former, however, we learn, intends to advance by the line of the Atrek river, which passes through a valley which is comparatively fertile, and affords a comparatively easy route. But to do this it must violate Persian territory. Smarting under their recent failure and fearful of a diminution of prestige throughout the whole of Central Asia, the Russians are resolved to ignore this obstacle, and with or without the Shah's consent to take the easiest road to Merv. Already, indeed, it is believed that they have notified their intention to the

apathy of the past, and take steps to secure the incalculable advantages which would accrue to herself and her Eastern dependencies from the opening up of the Euphrates route.

The military and political value of the Euphrates Line is a matter of extreme moment, and has a far more decided bearing on the defence, not only of Turkey, but of Persia and the whole district lying between the Mediterranean, the Caspian, and the Indian Ocean than might at first be supposed.

So long ago as 1858 Field-Marshal-Lieutenant Baron Kuhn von Kuhnenfeld, Austrian War Minister, predicted that Russia would in future probably try to satisfy her craving for an open sea-board by operating through Asia.

"'"She will not," says this distinguished authority, "reach the shores of the Persian Gulf in one stride, or by means of one great war. But taking advantage of continental complications, when the attention and energy of European States are engaged in contests more nearly concerning them, she will endeavour to reach the Persian Gulf step by step by annexing separate districts of

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Court of Teheran, and the Russian papers write coolly of different Persian towns as probable stages. If they carry out their resolve, the Russians will certainly next year reach Merv. Last January Sir Henry Rawlinson, in a lecture delivered to the Royal Geographical Society, said, "If Merv is ever attacked by a Russian column from the Caspian, the troops will, in my opinion, have to operate along the high road leading north-eastward from Serakhs." He wound up his lecture with "If Persia were decidedly opposed to the Russian movement, and refused to permit any infringement of her territorial rights, the march from Akhal to Merv would be impossible." But unsupported by England, Persia could not refuse.

Armenia, by operating against Khiva and Bokhara, and by seizing Persian provinces. . . . .

'"The most important lines which Russia must keep in view for these great conquests are,

'"1. The line from Kars to the Valley of the Euphrates and Mesopotamia.

'"2. That from Erivan by Lake Van to Mossul in the Valley of the Tigris, to Mesopotamia, and thence, after junction with the first line, to Bagdad.

'"3. That from Tabreez to Schuster, in the Valley of the Kercha, where it joins.

'"4. The road leading from Teheran by Ispahan to Schuster and thence to the Persian Gulf. . . . .

'"Once in possession of the Euphrates, the road to the Mediterranean, *viâ* Aleppo and Antioch, and to the conquest of Asia Minor and Syria is but short.

'"It is clear that all these lines are intersected by the line of the Euphrates, which, running in an oblique direction from the head of the gulf north of Antioch to the Persian Gulf, passes along the diagonal of a great quadrilateral which has its two western corners on the Mediterranean, its two eastern on the Caspian and Persian Seas, and so takes all Russian lines of advance in flank.

'"From this it is evident that the secure possession of the Euphrates Line is decisive as regards the ownership of all land lying within the quadrilateral. It must therefore be the political and strategic task of Russia to get the Euphrates Line into her hands, and that of her enemies to prevent her doing so at any cost.

'"The great importance of a railway along this decisive line which connects Antioch with the Persian Gulf follows as a matter of course. It is the only means by which it would be possible to concentrate, at any moment, on the Euphrates or in the northern portion of Mesopotamia, a force sufficiently strong to operate on the flanks of the Russian line of advance and stop any forward movement. . . . .

'"It is true that, at first, the aggressive policy of Russia in the East will only threaten the kingdoms of Turkey and Persia, but as neither one nor the other, nor both combined, would be strong enough, without assistance, to meet the danger successfully, England must do so; and it is certain that she must, sooner or later, become engaged in a fierce contest for supremacy with Russia. . . . .

'"The Euphrates Valley Railway becomes therefore a factor of inestimable importance in the problem of this great contest. Even now the construction of the line will counteract the Asiatic policy of Russia, for it will strengthen the influence of England in Central Asia and weaken that of Russia. . . . .

'"The growth of Russia in the East threatens, though indirectly, the whole of Europe, as well as the States named above, for, if she were firmly established in Asia Minor, the real apple of discord, Constantinople,* would

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* The "Novoye Vremya," in an article on the prospects of war, remarks that this is a question which greatly disturbs all Russian society. Neither the Russian people nor the Government, it says, wish to go to war, for the bad financial state of the Empire enjoins peace above all things, but every day and every hour its conviction deepens that a great struggle of some kind

be in imminent danger, all the commerce of the Mediterranean would fall into her hands, and she would command the canal through the Isthmus of Suez.

'"Whatever the commercial value of the Suez Canal to Central Europe, there is no doubt that it is secondary in importance to the Euphrates Railway, which affords the only means of stemming Russian advances in Central Asia, and which directly covers the Suez Canal."

"Yet the establishment of this route has been pressed for twenty years in vain on the attention of the Government of this country; and even the high recommendation of the Select Committee of the House of Commons has failed to awaken the Government to a sense of the gravity of the issues involved."*

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will probably soon break out. "The Western Powers," continues the "Novoye Vremya," "are very well aware of our peaceful disposition, but there is a limit to our indulgence and forbearance. Russia will never without war allow England to gain a footing on the Black Sea, to prevent which an alliance with Turkey at the present moment is the only means. The Porte has shown us her sympathy by appointing Mahmoud Nedim Pasha as Minister, and as England is now undermining Turkey we must defend her. To this end, moreover, Turkey, as our ally, must intrust us with the defence of the entrance to the Black Sea and hand us over the keys of the Dardanelles. It would be an enormous fault, never to be pardoned, did we not avail ourselves of the favourable disposition of the present Ottoman Ministry."

* "The Euphrates Valley route to India, in connection with the Central Asian Question," by W. P. Andrew. A Lecture delivered at the Royal United Service Institution, May, 1873.

APPENDIX I.

SHERPUR CANTONMENT.

The following description of the Sherpur entrenchments, given by a correspondent of the "Bombay Gazette," is particularly interesting at the present time:

Within two miles of the city of Kabul, on the north, lies the Bemaru range. This consists of a couple of large conglomerate hills running in a perfectly straight line east and west. These cover a mile of ground in length, and are about two hundred and fifty feet high, sharp, and well defined. With both flanks resting on the extremities, runs a line of splendidly built barracks in a semicircular form, thus giving the cantonments the shape of the figure of the letter D. These barracks are quite new, extend nearly two thousand yards in length, the rooms being thirteen feet broad, and the outer verandah also thirteen feet wide. It is calculated that there is sufficient accommodation in them for five thousand five hundred Europeans, without including verandahs. About two hundred yards of one flank of these barracks is clean blown away by the explosion of a magazine on the 7th ultimo by the mutinous troops on their quitting Sherpur to occupy the heights above Kabul. The roof of this long line of barracks has a parapet running all along it, whilst forty feet outside, facing the city, runs a very thick, lofty, defensible mud wall, utterly unassailable except by artillery. At a distance of every

four hundred yards in the line are magnificent gateways, which, of course, have been appropriated by the staffs of the various brigadiers.

These barracks are most substantially built, and must have cost an enormous sum of money unless the labour employed on them was forced. The wood was all brought from the Shutargardan or Hazar Darukt defiles, which we noticed, on threading our way through a month ago, had been perceptibly stripped and thinned out. Ordinarily wood in Kabul is very scarce, all the mountains and hills within sight having been so entirely denuded of the timber with which they were probably clothed some centuries ago, that now there is hardly a tuft of grass, certainly not a shrub, to be seen on any of them, every hill looking like a heap of loose boulders if not conglomerate, and up to the Shutargardan, and all through the defile of Dobundi, every hill is desolate, barren, and bare. The west flank of the barracks has not yet been completed, but remains in a half-finished state. Three new mud forts, capable of holding two hundred men each, protect this side.

The ground enclosed between the Bemaru hills and this long line of fortified barracks is perfectly flat and level, and highly cultivated. A large canal runs through the centre of this land, and every hundred yards is irrigated by a branch canal or *rajbari*.

At the foot of one of the hills the late Amir, Shere Ali Khan, had commenced to construct his new palace. The foundations had only risen about ten feet above the ground, when the work seemed to have stopped. This place, which is about a hundred yards square, has been handed over to the 5th Gorkhas, who are constructing their huts outside and inside this solid wall, which, of course, will save them the trouble of building a back wall.

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THE

BOLAN AND KHYBER RAILWAYS.

REPRINTED FROM THE "TIMES."

BY

W. P. ANDREW,

WITH A MEMORANDUM BY SIR HENRY GREEN, ON PORTABLE RAILWAYS IN MILITARY OPERATIONS.

CLINTON HALL
FOR THE USE OF
ASSOCIATION, N. Y.

In these border lands (Beloochistán and Afghánistán) to have a rival in prestige and power would be dangerous—to have a superior would be impossible.—INDIA AND HER NEIGHBOURS, p. 319.

LONDON:
W. H. ALLEN & CO., 13 WATERLOO PLACE,
PALL MALL, S.W.
PUBLISHERS TO THE INDIA OFFICE.

1879.

Times, Oct. 13th, 1879.

Were it not that the situation is critical, the announcement would be simply ludicrous, that mules, ponies, and carts are being transferred from the Sukkur and Bolan to the Kuram and Khyber routes; as Sukkur must be nearly six hundred miles from Peshawur, their transport will occupy some months in completion. Persia, too, is contributing mules, and the Scinde, Punjab, and Delhi Railway, which has undertaken the working of the entire line from the sea to Lahore, is busily employed in conveying material for the construction of the line from Sukkur to Dadur. It is now upwards of a quarter of a century since the chairman of the Scinde Railway commenced to broach the idea of connecting the Khyber and the Bolan passes with the railway system of India. For more than a quarter of a century he has unsparingly advocated these views, not only in weighty official communications to the Indian Government, in repeated letters in our columns, but in books replete with valuable information concerning the trade and history of India. Last year we reviewed a work by Mr. W. P. Andrew in which he energetically insisted on the immediate completion of a railway to our scientific frontier. Only a few days ago we published a letter from him adverting to the same subject. Had the views so persistently advocated by Mr. Andrew and so repeatedly brought forward by us been adopted at the commencement of the struggle last October, as we then ventured to insist upon, vast sums would have been spared in the hire of transport, and we should have been spared the ignominy of feeling that a British army, nominally on active service, has occupied five weeks in covering less than seventy miles.

THE

BOLAN AND KHYBER RAILWAYS.

CLINTON HALL
FOR THE USE OF THE
ASSOCIATION, N.Y.

RAILWAY TO THE BOLAN PASS.

TO THE EDITOR OF THE "TIMES."

Sir,—Would you do me the favour to allow me to correct a slight inaccuracy in the very interesting letter of your Correspondent at Lahore in the "Times" of yesterday? Your Correspondent states that Colonel Medley, Consulting Railway Engineer, was the first to recommend a railway to the Bolan Pass, whereas the truth is Sir Bartle Frere, when Commissioner in Scinde, and the late distinguished officer General John Jacob recommended it many years ago, "as obviously essential to secure communication between the river and the important frontier towards the Bolan Pass."

In 1857, as the spokesman of a deputation to Lord Palmerston regarding the Euphrates and Indus route to Central Asia, I ventured on strategic grounds to

advocate the line to the Bolan and also to the Khyber in the following words:—

"The grand object was to connect England with the north-west frontier of India by steam transit through the Euphrates and Indus valleys. The latter would render movable to either the Khyber or the Bolan, the two gates of India, the flower of the British army, cantoned in the Punjab; and the Euphrates and Indus lines being connected by means of steamers, we should be enabled to threaten the flank and rear of any force advancing through Persia towards India, so that the invasion of India by this scheme would be rendered practically impossible."

In the opinion of competent authorities on the spot, had these lines to the Bolan and the Khyber been completed they would have been equal to an army of forty thousand to fifty thousand men in the present invasion of Afghanistan.

The allusion by your Correspondent to the Scinde, Punjab, and Delhi Railway Company is very gratifying to

Your obedient Servant,

W. P. ANDREW,

Chairman, Scinde, Punjab, and Delhi Railway Company.

Gresham House, Old Broad Street,
January 14, 1879.

BREAK OF GAUGE IN INDIA AND WANT OF RAILWAYS TO THE BOLAN AND THE KHYBER.

TO THE EDITOR OF THE "TIMES."

SIR,—Knowing the value of your space at this moment, I venture with much reluctance to be allowed as briefly as possible to call public attention to two subjects which affect alike the defence and well-being of our Empire in India.

In the "Times" of to-day I see, according to Reuter's telegram from Bombay, February 23, that "the decision of the Indian Government to lay a narrow gauge on the section of the Western Rajpootana Railway causes great dissatisfaction among all classes of the mercantile community in Western India. A large and influential meeting was held on the 21st inst., at which a memorial to the Secretary of State for India was enthusiastically adopted in favour of the broad gauge system."

The object of the Western Rajpootana line was to give Delhi and Agra and the surrounding and intervening country the benefit of railway communication to the great port of Bombay, through a junction with the Bombay and Baroda Railway, which is constructed on the normal gauge of 5 ft. 6 in., and has been in profitable working for years, but the Government are constructing the continuation of this line to Agra and

Delhi on the metre gauge of 3 ft. $3\frac{3}{8}$ in. No wonder that the merchants of Bombay have at last awoke and are preparing to memorialise the Secretary of State for India to save the metropolis of Western India and its magnificent harbour from the dire calamity of a break of gauge in its grand trunk railway to the commercial centres and rich producing districts of North-West India! A break of gauge anywhere must be a mistake—a mistake and an injury; but deliberately to introduce a break of gauge in the Rajpootana line connecting Delhi and Agra with Bombay is strategically, politically, and commercially a blunder of the first magnitude, and without excuse. The Indus Valley Railway system was rescued, after a hard struggle, from a break of gauge, and the sooner the threatened injury to the Rajpootana Railway is averted the better it will be for the Government and people of India. The above remarks apply, although with diminished force, to other persistent attempts to dislocate the railway system of India. This is so suicidal, it is almost incredible.

On a recent occasion you were good enough to allow me to repeat what I had said as to the lines of railway to the Bolan and Khyber, and I find it stated by a correspondent at Jacobabad, by the last mail, that "Had the line been made to Dadur (near the mouth of the Bolan) and the rails and sleepers plated with silver, it would have repaid itself in the course of a few months, and most certainly before the end of the campaign, or occupation of Afghanistan,

as the case may be." It is also stated in the Indian papers that, notwithstanding the strenuous exertions of Sir R. Temple to obtain even a surface railway towards the Bolan, the Government of India, "after mature consideration, find themselves unable to accept the proposal."

Nothing can be worse or, in the end, more expensive than thus trifling with these great political and commercial questions; and who is responsible for doing what ought not to be done, and for leaving undone what is so notoriously and urgently required to save life and treasure? Certainly not the distinguished and gallant gentleman, the Minister of Public Works in India.

I am, Sir,

Your obedient Servant,

W. P. ANDREW,

Chairman, Scinde, Punjab, and Delhi Railway Company.

Gresham House, Old Broad Street,
February 25, 1879.

MEMORANDUM BY SIR HENRY GREEN ON PORTABLE RAILWAYS IN MILITARY OPERATIONS.

In July last I received the following memorandum from Major-General Sir Henry Green :—

As an instance of the benefits which may be secured by the employment of portable railways in military operations we may refer briefly to the experience of the difficulties of ordinary modes of transport gained during the recent campaign in Afghanistan and the present state of affairs in that country. The new Treaty of Gundamuck lately concluded between the British and Afghan Governments gives to the former certain strategic positions situated beyond the actual frontier of India, but to obtain the greatest advantages both military and commercial from these positions it is necessary that they should be connected with the Indian railway system.

The most important of these positions is the town of Quetta, situated in the valley of Shawl, which latter commences after passing the summit of the Bolan pass. This position will in future become

of the greatest importance both as a strategical and commercial depôt, and in case of future political complications which might be caused by a Russian advance on Herat, would become the base from which an army would have to start. It becomes, therefore, absolutely necessary to connect Quetta by rail at the earliest date with the Indian system. This system is now extended to Sukkur on the Indus, a distance of about two hundred and twenty-five miles from Quetta. The first portion of the road leads to Jacobabad—fifty miles—over nearly a dead level for the whole distance, then to Dadur—about ninety miles—the same description of country. The only difficulties to be met with are the floods from the Indus, which at a certain season of the year run across the line of road. From Dadur to the summit of the Bolan is through the pass of that name, and a good road has already been constructed. We then come to the valley of Shawl at the north end of which the town of Quetta is situated at a distance of twenty-five miles, the road leading over a hard level plain.

On the first part of the road named, from Sukkur to Dadur, a permanent railway will have to be constructed. This will probably be for some time deferred owing to the difficulty, before shown, of controlling the floods from the river—probably another five years will still see it unfinished; the next portion up the pass must take a considerable time before the rail can be constructed, but from its summit the country is particularly well adapted for a line such as

that shown to-day,* and such a line if laid down would give very great assistance in conveying military stores to our new outposts at which a very large magazine must be prepared.

The loss of camels during the recent campaign is estimated at from thirty thousand to forty thousand; the effect has been to almost exhaust the supply of the frontier provinces of Sind and Punjaub, and which supply it will take years to replace. It therefore becomes necessary that every mechanical means should be employed to lessen the demand for such transport —more particularly that if any sudden demand were to be caused by political complications, camel transport would certainly not be procurable except under very great difficulties and enormous expenditure. The loss sustained to the Treasury by the mortality amongst these animals during the late campaign cannot have been much less than two hundred thousand pounds, and if this means of transport is to be the only one employed to connect us with our new outposts, a continuous loss must ensue.

From the above we may deduce the following— that had the railway been in existence between Sukkur and Dadur, and between the summit of the Bolan and Quetta before the late campaign it might have been completed, including rolling stock, for a less sum than it has cost the State for the loss of camels,

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* Fowler's portable railway worked in the garden of Stafford House, July 1879.

and the railway would still have been in their possession for further work.

For instance, a portable railway such as that now exhibited, and described above, could be laid down between the summit of the Bolan and Quetta, a distance of twenty-five miles, for about the sum of twenty-five thousand pounds, including rolling stock, this being but equal to the cost of, say, three thousand five hundred camels at seven pounds each. It is to be borne in mind that such a railway is not merely suitable for being worked by steam power, but is, as we have already stated, equally efficient as a tramway, and on it a camel could haul a load of about five tons, whereas the load which a camel can *carry* is but about three hundred and fifty pounds. Under efficient supervision a camel will march twenty miles per day.

THE BREAK OF GAUGE IN INDIA, AND WANT OF RAILWAYS TO THE BOLAN AND THE KHYBER.

TO THE EDITOR OF THE "TIMES."

Sir,—Some little time ago you were good enough to afford me space in the "Times" for a few remarks

under the above heading, and as recent events in Afghanistan have rendered still more grave the want of railway communication to the Bolan and Khyber passes, I am induced again to crave your indulgence.

The services rendered by the Punjab and Delhi Railway in the conveyance of troops and munitions of war have been acknowledged by the Commander-in-Chief and the heads of departments in India.

From recent information I believe that forty thousand troops of all arms could be conveyed from Delhi to Lahore (three hundred and forty miles) in ten days, and thirty thousand from Moultan to Lahore (two hundred and ten miles) in the same time, or a total force of seventy thousand men, with guns, horses, and baggage complete.

The working of the Indus Valley State Railway is about being made over to the Scinde, Punjab, and Delhi Railway Company, which, with the lines already in the hands of the Company, will give a continuous trunk line from Delhi to Kurrachee of nearly one thousand two hundred miles in length, and of uniform gauge. But the vast political, strategical, as well as commercial advantages of this great undertaking have been, and continue to be, dwarfed by the inexplicable delay in carrying branch lines on the normal gauge to the Bolan from Sukkur, on the Indus, one hundred and forty miles, and from Lahore to the Khyber, two hundred and sixty miles. The former has not been commenced, and the construction of the latter has

halted midway, and the Indus at Attock is unbridged. Having advocated the lines to the Bolan and the Khyber for a quarter of a century on political and strategical as well as on commercial grounds, I am glad to see that their importance and necessity have secured your powerful advocacy.

Yours, &c.,

W. P. ANDREW,

Chairman of the Scinde, Punjab, and Delhi Railway Company.

Gresham House,
September 29, 1879.

EXTRACT FROM THE "TIMES."

Now that the Indian Government finds itself face to face with a second winter campaign on the North-west Frontier, the most strenuous efforts are being made to push on the railway from Jhelum to the mouth of the Khyber. At the commencement of the Cabul *imbroglio*, last October, we repeatedly urged the necessity of the measure. Had even the most ordinary exertion been used, working by double tides —that is, from either terminus—the line should have been completed, with the exception of the larger

bridges, by this time. The energy which enabled our Trans-Atlantic cousins to carry on the line which joins the Atlantic with the Pacific at the rate of a mile a day is conspicuous by its absence in the Indian Public Works Department. From Jhelum to Rawul Pindi is but seventy miles, and yet we are told that six months must elapse before these two cantonments can be in direct railway communication. The country over which the rail will pass is difficult, no doubt, intersected by innumerable ravines, but it presents no great engineering difficulties. Labour is cheap and plentiful, engineer officers are to be had in abundance, and were the work divided into sections it seems incredible that it could not be completed in as many weeks as we are now told it will require months. The branch line to Kohat seems an unnecessary expenditure. In two months the road through the Kuram Valley to Cabul will be closed, owing to snow, and Sir F. Roberts will then be compelled to fall back upon the Khyber for supplies and reinforcements. The Kuram Valley can never become one of the main thoroughfares to Afghanistan, because the Shutargardan remains impassable for fully a third of a year. The garrison that will eventually remain in the valley will be merely sufficient to hold in check the predatory clans who line the heights on either side. It can never be used as a base for any operations to the westward, owing to the certainty of climatic considerations necessitating a severance of all lines of communication; for the same reason it can never

become a great commercial highway. The money spent on a railway to Kohat will be money wasted. Every effort should be made to complete the line to the mouth of the Khyber, and now that the Sohan river is bridged at Rawul Pindi there certainly is no adequate reason why trains should not be steaming into Jamrud by Christmas Day. A break must necessarily occur at Attock until the Indus is bridged, but plant could readily be ferried over the river, and the delay on this account would be trifling. Designs and estimates for this bridge have been lying pigeon-holed for upwards of thirty years, so there is no reason why the work, too long delayed, should not now be immediately commenced. The question of fuel, fortunately, is of easy solution; vast coal-fields lie within easy reach of the Indus, and the scantiest encouragement from the Indian Government would induce private enterprise to develope the inexhaustible resources of our Trans-Indus provinces, which for three decades have been left a virgin territory.—*Times*, 7th September 1879.

INDIA AND HER NEIGHBOURS.

Fortune has favoured Mr. Andrew in the opportune appearance of his book on India . . . . If we are to oppose effectual barriers to Russian encroachments, we must tighten the bonds and consolidate the communications that unite us to our fellow subjects in Hindostan . . . . While M. Lesseps was agitating his great project, Mr. Andrew had always been the consistent advocate of a railway down the Valley of the Euphrates, which should connect the Mediterranean with the Persian Gulf . . . . It ought to prove as useful as it is certainly extremely interesting . . . . In the chapters on "British Rule in India," and "Governors-General," he has given a succinct and lucid history of the growth of the trading-posts that were established on sufferance in the mighty empire that has been casting its shadows over Constantinople and the deliberations of the Congress at Berlin.—*Times.*

Among the many services rendered to India by Mr. Andrew the present must be regarded as both opportune and acceptable. It presents all the salient points of Indian history in a picturesque and graphic form . . . . The leading facts are well marshalled, and the chief actors brought out in bold relief . . . . Several chapters of great brilliancy, devoted to the "remarkable women of India" . . . . The characters of our several Governors-General from Clive down to Viceroy Lord Lytton are dashed off in a chapter of their own.—*Morning Post.*

We must dismiss it with praise for its general accuracy, its completeness, precision, and, not unfrequently, also for its eloquence.—*The Examiner.*

At Cabul as well as at Livadia, at Delhi as much as at Cairo, at Berlin as quickly as at Paris, the honest announcement by the English Government that it would disregard any obstacles thrown in the way of its shortest road to India, would be at once respected and understood. We conclude with an extract from the preface to "India and her Neighbours," a work which we should be glad to find have an effect in removing that blank feeling of utter ignorance about India which is so general even among cultivated Englishmen.—*The Edinburgh Quarterly Review.*

M. Andrew, dans l'intéressant ouvrage qu'il vient de publier sous ce titre, "l'Inde et les pays voisins," nous retrace à grands traits l'histoire du développement primitif de l'empire indien.—*Revue des Deux Mondes.*

The author acquaints his readers with the details of the geography of India, with the climate, flora and fauna, mineral wealth, population, notable women; with the history of India from remote ages to the period of the proclamation of Queen Victoria as Empress of India in 1877; with the Governors-General of India, the vassal states, Indian possessions of other European powers; with the Portuguese, Dutch, and French; with the trade of India, internal and external communications; with her finances; and, finally, with her neighbours . . . . He foresees that Russia will certainly possess herself of Merv, and will gain over all the neighbouring tribes to her own interests . . . . That if she gains a firm footing in Asia Minor, Constantinople will be in imminent danger.—*The St. Petersburg Vedomosti.*

He has the historian's faculty of gathering up and sorting his materials with the pen of knowledge and experience.—*Times of New York.*

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TRANSPORT BY RAIL

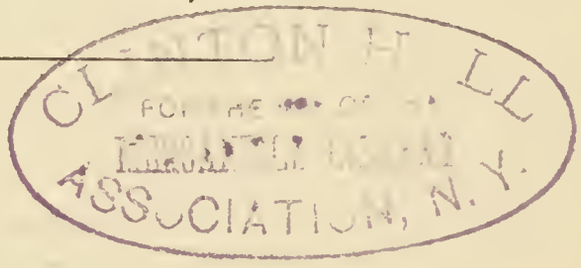
OF

TROOPS, HORSES, GUNS, AND WAR MATERIAL IN INDIA.

A LECTURE BY D. ROSS, ESQ.,

TRAFFIC MANAGER, SCINDE, PUNJAUB, AND DELHI RAILWAY,
BEFORE THE SIMLA UNITED SERVICE ASSOCIATION.

REPRINTED FROM THE "CIVIL AND MILITARY GAZETTE," OF 2nd OCTOBER, 1879.



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W. H. ALLEN & CO., 13 WATERLOO PLACE,
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1879.

"If there be any railway in existence which requires to be efficient and strong, and ready to carry great numbers of people, and a heavy description of traffic—such, for instance, as warlike stores and heavy ordnance—that is the Indus Railway; and yet that is a railway that some people would put on a different gauge from other railways in India. What would be the result? Supposing an outbreak occurred in the North-West Frontier—the very purpose of that railway is in a large measure political—they would desire to send large forces, and they ought to be able to send them at once; instead of that, they will only be able to send them slowly and by driblets. Instead of having the enormous rolling-stock of India available on any great emergency, they will have nothing but trumpery waggons and weakly little locomotives; and before they could have reinforcements sent, they would ascertain what a mistake they had made, and that a common road, if they would only bridge it, would be a better means of conveyance than the narrow-gauge light and inefficient railways."—Speech of chairman of S. P. and D. Railway.—*Railway Times, Dec.* 23*rd*, 1870.

Note.—Although the narrow gauge above Lahore has been altered to the broad, heavy locomotives cannot go over the existing narrow-gauge bridges.—1*st Dec.* 1879.

CLINTON HALL
FOR THE USE OF THE
ASSOCIATION, N.Y.

TRANSPORT BY RAIL

OF

TROOPS, HORSES, GUNS, AND WAR MATERIAL.

At a meeting of the Simla United Service Association on the 10th October 1879, Colonel the Hon. Sir Andrew Clarke, K.C.M.G., C.B., R.E., in the Chair, a paper was read by Mr. David Ross, Traffic Manager of the Scinde, Punjaub, and Delhi Railway, on "The Transport of Troops by Rail," of so much interest and importance that, in the after discussion, Sir Andrew Clarke, referring to the opportune nature of the lecture at the present critical moment, and its thoroughly practical character, requested the Honorary Secretary, Captain Anderson, R.A., to have it printed at once for the information of Government, and the various military departments, and also to circulate copies to all the railway authorities in India. He thought that it should be in the hands of all officers, from the Commander-in-Chief downwards, concerned with army transport.

For some years back (said the lecturer), experiments have been conducted by the military and railway autho-

rities, in loading and disembarking troops, horses, and guns, also in despatching special trains for short distances to test the relative advantages of the different methods. End and side loading of vehicles, the use of stations, loading platforms, and also their non-necessity, have their respective advocates. The result of these experiments has been so ably treated by Major LeMessurier, R.E., in a paper read, I understand, some time ago, before the members of this Institution, that it is unnecessary for me to go into details connected with the different systems. Although I assisted in the first experiments made by Sir Charles Reid, K.C.B., in regard to end loading, my absence from India in 1875 prevented my being present at the more extensive experiments afterwards conducted at Delhi and Lahore during the Prince of Wales's visit. The principal objection, however, which I consider can be urged against the otherwise admirable system of end loading is that it virtually blocks the line between any two stations while troops or guns are being loaded or discharged, and of course stops all traffic, whether military or public, for the time being, on either side, which is a very grave fault. In my opinion the operation of end loading on main lines should only be resorted to in very exceptional cases, as for instance, in the event of an engagement actually taking place on, or in the immediate vicinity of, a line of railway. Stations should always be utilised for loading and unloading troops, horses, or guns as far as possible, otherwise the whole traffic of the railway is disorganised, and this would be more especially likely to take place on our Indian single lines of railway with the heavy traffic which would of necessity occur in moving

large bodies of troops and war material with possibly every crossing station occupied by trains, as was lately the case.

We have had considerable experience lately on the Scinde, Punjaub, and Delhi Railway in the transport of troops, both in connection with the Bengal portion of the expedition despatched to Malta, and still more recently in forwarding the army for Afghanistan. My remarks will now be confined to the practical work done, in the conveyance by rail of troops, horses, and stores, the capacity of our railway for military movements, and briefly the lessons we have learned from our late experience. The movement of troops to and from the frontier commenced, it may be said, in October 1878, and ended in June 1879. During that period we conveyed over the Scinde, Punjaub, and Delhi Railway system, in round numbers, about—

190,000 troops and followers.
24,000 horses, ponies, and mules.
8,000 bullocks.
1,000 camels.
500 guns, artillery, and engineer carriages.
1,400,000 maunds (51,433 tons) of commissariat, ordnance and military stores.

In addition to the ordinary passengers and goods trains, by which large bodies of troops and nearly all the military stores were conveyed, about two hundred and fifty special trains were required for the transport of this army. The maximum number of troops and horses carried during any month was in November, when eighty-one special trains ran, conveying—

40,000 troops and followers.

6,500 horses, ponies, and mules.
1,500 bullocks.
260,000 maunds (9,552 tons) of commissariat and ordnance stores.

The greatest number of special trains running in any one day was eight, carrying—

4,100 troops and followers.
300 horses, ponies, mules, and bullocks.
10,000 maunds (368 tons) military stores.

The hours of starting, constitution of the trains, halts, and arrival were fixed in consultation with the respective assistant quartermasters-general, and there was no difficulty as a rule in arranging the time so as to suit the military authorities, and at the same time not to interfere in any way with the public traffic. The ordinary traffic of the line was not delayed or interfered with, although troops and military stores had in all cases the first supply of vehicles and also priority in despatch. In each instance printed time-tables were issued to all the stations concerned showing distinctly the times of arrival and departure, and where other trains were to be passed or crossed, and halts for refreshment. Copies of these time-tables were furnished to the respective assistant quartermasters-general and commissariat officers, and also to the officer in command of the troops proceeding with the special train. When the urgency of military requirements did not permit of sufficient previous notice being given to issue printed time-bills in the usual way, the necessary instructions to the traffic staff were telegraphed to all stations in regard to the running of troop special trains. The only

way in which the public suffered, although I believe the natives considered it no hardship, was the substitution of covered waggons for third-class carriages, the latter being all required for the conveyance of troops. To adapt these covered waggons for the carriage of passengers, the operation was very simple and quickly effected. The two upper iron panels of the doors on each side and two panels at each end were removed, which afforded sufficient ventilation. These vehicles similarly treated with the addition of breast-pads fixed across the waggon, were admirably adapted for the carriage of horses ; eight were loaded in each waggon, four at each end, with the horses' heads in the centre, allowing space between for syces (grooms), provender, and harness. About two hundred and fifty waggons were altered for the conveyance of ordinary third-class passengers and cavalry, which enabled the Scinde, Punjaub, and Delhi Railway to meet all requirements by the military authorities, and also for the conveyance of the regular traffic of the line. The ordinary horse-boxes were in all cases used for officers' chargers. The weight of stores despatched, fifty thousand tons, only represents the quantity booked under Government warrants, and as the greater portion of commissariat supplies were sent by traders, these figures only approximately show what was actually forwarded by rail. On the other hand, the number of troops and followers conveyed, one hundred and ninety thousand, may seem high. This results from each separate despatch of troops being shown as a fresh departure. Thus, a number of regiments were concentrated at Mean Mir, Mooltan, and elsewhere in the first place, and remained

there for a few weeks before proceeding to the front. Such troops, of course, are reckoned twice. Each despatch involved nearly the same amount of work with the exception of haulage to the railway authorities, as if the regiments had gone at first right through to their destination, at least so far as collecting stock, embarking and disembarking, and arranging time-tables were concerned.

At Umballa, when the 10th Bengal Cavalry left for Malta, we loaded a troop of eighty horses in ten minutes from the ordinary platform. As a rule there was greater trouble and delay in trucking the grass-cutters' ponies than with the troop horses; the former frequently had to be thrust into the vehicle by physical force. The average time occupied in loading up a squadron of cavalry consisting of—

8 officers,
128 rank and file,
92 followers,
130 troop horses,
21 officers' chargers,
165 maunds (6 tons) of baggage and ammunition,

was about one hour and thirty minutes; but with platforms of sufficient length and height, this could be easily reduced to one hour, and about the same time should be allowed for discharging. I am aware that this is nearly double the time occupied at previous experiments, but as these horses were proceeding on field service, the commanding officers as a rule exercised great care in loading the horses, and allowed no undue haste in case of injury to the animals. We had no opportunity of

ascertaining fairly the time taken in loading guns, as our platforms were generally too low and the opening in the sides of the trucks too narrow to permit of a proper test. A number of camels were forwarded by rail ; but the process of loading them in the ordinary way is very tedious and somewhat cruel to the animals. They should, I consider, be made to kneel, secured in that position with ropes and tarpaulins, and then slung into the waggon with a crane. Four can be loaded in a high-sided truck, with their heads towards the centre.

The speed of the troop specials averaged about twenty-one miles per hour, exclusive of stoppages, which were fixed by the military authorities. Loads averaged thirty-three vehicles per train. The troops, horses, guns, and military stores were all conveyed with perfect safety, and the special trains ran punctually, notwithstanding a very heavy public traffic which passed over the railway at the same time and a sickly season to contend with: at times twenty-five per cent. of the staff were prostrated. For some time we had fifty trains entering and leaving the Lahore Station daily, which will give some idea of the heavy work that had to be conducted, and this on a single line of railway. All the arrangements with the Quartermaster-General's and other military departments, and also the officers in command, were conducted with the utmost harmony, and a mutual desire to assist and promote the main object in view was apparent on all sides. Some time previous to the declaration of hostilities with Shere Ali, I prepared a troop time-table showing the maximum carrying capabilities of the Scinde, Punjaub, and Delhi Railway, assuming that the ordinary traffic was stopped, and that

we had sufficient engine power, and also that the necessary platform and siding accommodation would be provided at the rest and terminal stations.

It may be interesting here to give a summary of our powers of transport if any great emergency was to arise. The time-table for army trains referred to provides for eleven trains running each way on the Lahore and Mooltan section, and fifteen trains in each direction on the Lahore and Delhi division. This is the maximum number of trains that could be run with a load of thirty-five vehicles at a speed of twenty miles per hour, with the existing number of crossing stations and allowing stoppages for breakfast and dinner, varying from one and a half to two and a half hours. Working the trains in this manner, and with our covered goods waggons converted as mentioned for the carriage of troops and horses, we should be able to concentrate on Lahore from the Mooltan and Delhi directions, without assistance from other railways, a force equal to—

3 batteries of artillery,
2 regiments of cavalry,
3 do. European infantry,
5 do. Native do.

or a total of seven thousand men of all arms every twenty-four hours. The result of an estimate of the rolling stock necessary to keep all the trains in the special army time-bill, shows that we have sufficient accommodation,

1st, for officers,
2nd, for horses,
3rd, for guns,

4th, for baggage,
5th, for ammunition.

(Our own panelled covered waggons will answer this latter purpose.) We would, however, be short of second and third class carriages for men and followers by at least four hundred vehicles, but to meet this we have about eight hundred covered goods waggons available, which could be utilised in lieu of the deficient stock, if say five hundred waggons were fitted with moveable seats for men, and sufficiently ventilated by the removal of the iron panels. We would, therefore, have really no extraordinary difficulty in providing the requisite vehicles for all the trains mentioned, so it is not too sanguine a statement to make that forty thousand troops of all arms could be brought from Ghazeabad to Lahore in ten days, and about thirty thousand from Mooltan to Lahore in the same time, or a total force of seventy thousand with guns, horses, and stores complete. The total number of vehicles at present on the Scinde, Punjaub, and Delhi line, exclusive of horse-boxes suitable for horses, is one hundred and thirty, which will only accommodate nine hundred and eighty horses if all could be used at the same time, but as ten per cent. of all rolling stock must be allowed for as under repairs, it would be requisite to fit up about four hundred and twenty-five additional vehicles of our covered goods waggons to carry horses in the same manner as was done with the one hundred vehicles which conveyed a part of the Indian contingent to Bombay when *en route* for Malta. It would be also necessary to construct a dozen loading-boards for every additional hundred waggons of the approved type.

This estimate does not provide for rolling stock being detained during the necessary halts *en route* for sleep, but to meet this, and to prevent the vehicles standing idle while the troops are resting, I would make the following proposals. If the military authorities require halts to be made at the regular rest-camps, and the stoppages do not exceed in length those shown in the time-table, it does not matter whether the halts take place at one, two, or three different stations, so far as the carrying capabilities of the line for military purposes are concerned ; but if the halts are in any way lengthened, it will at once curtail our power, as plant and engines cannot be worked round so quickly. If a real emergency arose of the kind for which a special military train service would be necessary, the main object of the Commander-in-Chief will probably not be so much the convenience of the commissariat department to provide food for troops *en route* at the fixed places where they have the requisite establishments in time of peace, as to push troops to the front as quickly as possible, and when generals have this object in view, the usual practice in campaigns is to serve out cooked rations for two, three, and even four days, and merely halt to supply beer and rum, or for other necessary purposes. When halts have to be made of longer duration than those entered in the time-table, in order to enable the troops to have a night's rest, such halts in an emergency should take place at distances about two hundred miles apart. These halts would not necessarily interfere with the time-table, although the stoppages are not specially arranged for. All that is required is, say, if No. 10 up train from Ghazeabad carrying troops which are to rest twelve

hours at Meerut Cantonment that No. 10 should for that day become terminal at that station and subsequently continue its onward journey as No. 22 or 24, which may possibly bring troops that are also to halt twelve hours there, or another body of troops which had previously halted at Meerut, may continue their onward journey to the time of No. 10, and so on. As there will be a constant flow of vehicles downwards, there should be no necessity for even detaining trains for such halts, the carriages might at once be returned to the junction at Ghazeabad, and others collected from down trains to make up their equivalent by the time troops were ready to move on again.

Another plan is perhaps preferable. The military authorities might set certain trains apart to carry infantry, others artillery, and others cavalry. Suppose No. 2 up train from Ghazeabad to Meerut brought daily a European infantry regiment, and No. 4 carried daily a European regiment from Meerut to Mean Mir ; in the same manner No. 18 could convey a European infantry regiment from Ghazeabad to Meerut, and No. 20 could carry a European infantry regiment from Meerut to Mean Mir. This example gives two European infantry regiments twelve hours halt each at Meerut, whilst immediately one regiment disembarks, another gets into the same train and proceeds onwards. To elaborate this system, it would be necessary to have the different army time-tables for the whole of the Indian lines before the officer regulating the movements, but there should not be the slightest difficulty in issuing the instructions necessary to give those concerned a clear idea of what was required. The Quartermaster-

General's Department would merely issue orders that certain trains on given lines and between certain rest-camps should carry any particular arm of the service, artillery, cavalry, or infantry, as may be decided on. That the troops travelling in such trains should halt at certain rest-camps. This ought to ensure the utmost regularity in the movement of trains and in giving all troops regular intervals of rest with the minimum sacrifice of time and efficiency in utilising the rolling stock. To carry this system out thoroughly, it would be necessary that stringent orders be issued that troops, horses, and baggage be unloaded at rest-camps or destination at whatever hour the train may arrive, the first halt of troops beginning a long journey would probably be longer or shorter than others, but subsequently with proper arrangements they would fall into the regularity of the time-table. In order to give full effect to this plan, it would only be necessary to have a shunting engine at each rest-camp to shunt off, or on, the regimental baggage as required, and the same with the horses and guns for cavalry and artillery, which, of course, would require to halt as long as the men. The heavy guns might, however, cause some lengthy detention to trucks, but of this stock each railway has an ample supply and to spare, and nothing would be lost by such detentions. A troop time-table would accordingly have to be prepared for all railways, and one distinctive letter or number should indicate each up or down troop train throughout between Calcutta, Bombay, Lahore, or Kurrachee, as the case may be, so that the Quartermaster-General may be able to order say train A. or train No. 6 to run on any particular day and

between any given points, train A. might be running on the same day from Howrah, say to Assensole, or between Kurrachee and Sukkur, or Meerut and Lahore, so as to suit requirements and the convenience of troops.

It is here necessary to state that the calculations as to plant available are made under the assumption that the heavy supplies of commissariat and other stores for consumption during the campaign, or at least sufficient for some weeks or months, have been forwarded previous to the despatch of troops. After the army has been conveyed to its destination by rail, then the rolling stock will again be available for the transport of any quantity of commissariat, ordnance, or general military stores that may be required to follow. When the troops are to be concentrated on one point or in one direction, as, for instance, on the Trans-Indus frontier, the up trains should have a clear road, and any giving way for necessary delays in crossings, should be arranged as regards the down trains. Three thousand five hundred troops could be landed at Lahore daily without disturbing the ordinary traffic of the line, or half the number of troops as compared with what has been shown would be conveyed if the public traffic was entirely stopped. This allows for six up and six down troop specials between Mooltan and Lahore, and eight each way between Delhi and Lahore. The regular traffic is estimated at the minimum; eleven passenger and goods trains in each direction, inclusive of through, mixed, and local trains.

I have shortly stated what was actually done in regard to the transport by rail of the army for Afghanistan, and also what the Scinde, Punjaub, and Delhi Railway was

prepared to perform under certain emergencies and conditions, and I will now as briefly detail what lessons and hints we have learned from the experience thus gained.

I presume no such strain as we have just contemplated could possibly be put on the railways either in regard to providing transport for such an army or furnishing the necessary rolling stock. But assuming that carriage was wanted for even half the number, viz. three thousand five hundred troops of all arms per day, still before we could be equal to convey this number in a thoroughly efficient manner the siding and loading platform accommodation at military stations, such as Meerut, Umballa, Mean Mir, and Mooltan, where there are rest-camps, would require to be largely increased.

Loading platforms at each of these stations equal to at least three troop specials, that is, one for infantry, another for cavalry, and a third for artillery or for commissariat and ordnance stores would be necessary, with the loading banks and sidings so arranged that the shunting of any one train would not interfere with the next; nor yet with the ordinary traffic or main line.

The platforms need not be expensive, but might simply consist of earthwork with a breast-wall—the loading bank sloped or ramped behind and at each end so that access could be had at all points by men, horses, or guns to the vehicles composing the train; the slope also would prevent all danger to refractory horses in case they backed and refused to enter the waggons. The old rails rejected from the main line would be admirably adapted for the purpose of these sidings.

This extra accommodation would also be useful during a heavy grain traffic, now of frequent occurrence in connection with famines, scarcities, or export trade, or in storing spare stock during a slack season.

Troop platforms should, in all cases, be nearly level with the floor of the waggons; so that horses and guns may be easily laden; such an arrangement is also more convenient for troops, baggage, and stores. Each loading bank should be long enough to hold a complete train of thirty-five vehicles with engine and tender clear of all other lines.

The platforms, in some cases not being long enough, the trains had to be loaded up in sections: first the troop horses, then the officers' chargers, and thirdly the baggage. If the train could stand complete alongside the platform, one hour would be sufficient to load a special train of thirty-five vehicles containing a squadron of cavalry. On more than one occasion we trucked a troop of eighty horses in ten minutes.

I attach great importance to the additional sidings and loading platforms mentioned, as one of the greatest difficulties we had to contend with in the recent despatch of troops to the front, was the want of sufficient lines and platforms. The marshalling of troop trains, embarking and disembarking men, horses, or guns, ought to be effected without in the slightest degree interfering with the ordinary traffic or blocking the main line. Further, the platform should be constructed on the echelon or step system, so that the moving of one train may not interfere with any other.

For the carriage of guns many of our open trucks are not well adapted, as only about five feet of the side flaps

fall down. These should be made to open back on hinges from end to end of the waggon.

The great advantage of having the goods stock so constructed as to be easily convertible to suit for the carriage of troops, horses, or third-class passengers, has lately been most apparent.

In any case of emergency, these waggons filled with wooden planks for seats could also be easily adapted for the transport of European infantry. Native passengers seem to prefer them without alterations, as they are thus enabled to squat down or recline on their bedding.

From thirty to thirty-five natives can be comfortably carried in the goods waggons during the cold season and about thirty in the hot weather. Brackets should also be filled up at the ends to hold lamps for night travelling.

Three hundred of the Scinde, Punjaub, and Delhi waggons are now being permanently altered, so that at a moment's notice they can be made available for the conveyance of troops, horses, or passengers.

The breast-bars for the horses are secured and slung from the roof of the waggon when not in use, and ventilation is obtained without the entire removal of the side and end panels.

The new loading-boards lately introduced, connecting the platform with the floor of the waggons, have much facilitated the trucking of horses. This board has moveable iron catches attached to the sides, so as to fix the waggon door at right angles to the truck, and thus not only forms a bar, but also prevents the horses' feet from slipping between the waggon and platform.

We found the ordinary iron-panelled goods waggon, with the floors covered and all chinks carefully closed, quite safe for the carriage of gunpowder and ammunition.

With railway establishments kept down to the very minimum, and only strong enough to provide for the conduct of the ordinary and regular traffic of the line, the military authorities should give the earliest possible information in the event of an anticipated large movement of troops, so that timely and due provision for extra staff may be made. As this, however, may not always be practicable or even advisable, Sir Andrew Clarke's proposal to establish a military railway corps would, in my opinion, best solve this difficulty; that is, to have soldiers trained in the different branches of railway work, so that in the event of war, when an extra pressure is thrown upon railways, these soldiers would be available as guards or for other duties for which they might be fitted, reverting to their regiment after the pressure was over.

Another point is that in an emergency, when the carrying and running capacity of railways are taxed to the utmost, orders for the movement of troops should be issued by one central authority in the Quartermaster-General's Department, giving due and definite particulars as to departure, halts, arrival, destination, and constitution of troop trains or for special train conveying military stores or live stock.

This is to prevent demands being made at one and the same time from two or three different points for special troop trains when probably there is only suffi-

cient stock for carriage from one station, and it would be necessary to decide which was the most urgent movement so as to give precedence.

One central authority regulating priority in the despatch of troops would also prevent the unnecessary haulage of trains to certain points, perhaps only to find on arrival that orders had been changed and that the troops were to remain, or probably to march by road.

The orders from the Quartermaster-General's Department should also be communicated direct to the traffic manager of each railway.

Military stores should never be loaded up or forwarded until their ultimate destination by rail is definitely known, as if waggons so loaded are detained, the work in the station-yard is seriously interfered with. These waggons take up the already limited siding accommodation, impede free working, prevent rolling stock being employed or fully utilised in the conveyance of other traffic, and altogether cause general confusion.

To show that the carrying powers of the Scinde, Punjaub, and Delhi Railway, as stated in the foregoing, are not over-estimated, I may mention that in connection with the recent Hurdwar Fair, during eighteen days in April, we carried about a quarter of a million of pilgrims in addition to the ordinary traffic of the line, as well as conducting considerable military movements, or, on an average, nearly fourteen thousand per day. Of course, to do this all descriptions of vehicles were employed, goods waggons, covered and open, cattle trucks, &c. It can, however, be understood

that the conveyance of these pilgrims was an easy matter as compared with the transport of an army.

With direct railway communication now established to the sea-board at Kurrachee, troops should, if necessary, be concentrated at Lahore in two or three days, and as the harbour now safely admits ships and transport of the heaviest draught, the military authorities have an immense power in their hands in addition to the facilities already existing at the ports of Bombay and Calcutta. The port of Kurrachee, however, has the great advantage of being two or three days nearer England not only on account of the shorter distance from Aden, but it is also favoured by the direction of the current during the monsoons, so that in the event of any great crisis in the history of India necessitating troops being urgently sent from Europe, Kurrachee doubtless must be the port of arrival.

I cannot conclude these brief remarks without referring to the enormous difficulties which the commissariat and transport departments had to encounter and surmount in the conveyance of stores during the late campaign from the termini of the lines of railway to the front, and how these difficulties would have been reduced to the very minimum if the far-seeing views of the Chairman of the Scinde, Punjaub, and Delhi Railway, Mr. W. P. Andrew, had been carried out, viz. the construction of railways to the mouths of the Khyber and Bolan passes, which he has so earnestly and persistently advocated for the last twenty years. Surveys and estimates were also prepared, I believe, about the same time for the information of Government. Our late experience proves the soundness of Mr. Andrew's views,

and no doubt his original schemes will be carried out in their integrity; the necessity for their immediate adoption has certainly made itself most manifest.

The following is a report of the discussion which took place at the conclusion of the lecture by Mr. Ross at Simla:—

Colonel Medley (Consulting Engineer to Government for Guaranteed Railways, Lahore) observed that Mr. Ross's paper was a good and practical one, and covered almost all the ground. The first idea that occurred to one was the enormous carrying power of the railway as compared with the road. One practical point that arose in connection with this was that the carrying power of a single line was very much increased by the number of crossing stations. Fortunately, before the late heavy traffic came upon the railway, they had a very heavy famine traffic, which necessitated a considerable number of extra crossing stations, which very greatly increased the carrying powers of the line. It was of course difficult to say at what distance exactly on a single line crossings should be put in, but if they were put in every six or seven miles it was evident that the carrying powers of the line would be very greatly increased, Colonel Medley quite agreed with Mr. Ross as to the importance of having separate platforms for military purposes. As to the covered goods waggons used for horses, Mr. Ross had said that eight horses had been comfortably put into each, but he thought that in the case of large horses they would be cramped for room. However, in the new

pattern of waggons ordered by Government, the dimensions were larger. As to carriages for troops, the Scinde, Punjaub, and Delhi Company were now converting a large number of first and old composite carriages into new third-class carriages on the American principle, which would be well adapted for troops, as there would be a passage down the centre carriage with end doors, which would enable the men to move about and stretch their limbs. In case of emergency, when it was desirable to avoid halting, a buffet or restaurant carriage could also be attached, and the men could have their food on the road. As to the iron goods waggons, it was found in Scinde in the hot weather, when horses were carried in them, that the heat of iron was so great as to burn and blister their skins, and it became necessary to line the waggons with wood. That, he thought, would always have to be done in future.

Mr. Molesworth (Consulting Engineer to Government for State Lines) remarked on the advantage that would arise from running the siding at the Lahore junction into the cantonments and military station, where loading-platforms and all appliances might be provided, and when all the troops would be under military command. He also thought that the use of a sling in loading refractory horses would save much time and labour.

Sir Andrew Clarke (Minister of Public Works) said it appeared to him that at the present moment no paper could be read or published so opportune as that by Mr. Ross; and as it contained a great amount of useful and suggestive information, he thought it would be very desirable that all military and railway authorities

should have it in their hands as soon as possible. With this view he hoped he might ask the Secretary to have the paper passed through the press at once and copies distributed. In conclusion, Sir Andrew Clarke tendered to Mr. Ross the thanks of himself and the meeting for his thoroughly practical and interesting paper, which was rendered all the more valuable by Mr. Ross's recent experience in the actual movement of troops, attended, as this had been, with considerable success under the difficulties indicated in the lecture.

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